QMS® 1060E Print System Operation

1800380-001B

Trademarks

The following are trademarks or registered trademarks of their respective owners. Those listed as registered are registered in the United States Patent and Trademark Office. Some trademarks are also registered in other countries. Other product names mentioned in this manual may be trademarks or registered trademarks of their respective owners. QMS and the QMS logo are registered trademarks of QMS, Inc., and Crown, the Crown seal, PS Executive Series, imPRESS, and UltraScript are trademarks of QMS, Inc. Adobe is a registered trademark of Adobe Systems Incorporated, registered in the United States Patent and Trademark Office. PostScript is a trademark of Adobe Systems Incorporated for a page description language and may be registered in certain jurisdictions. Throughout this manual, “PostScript Level 2” is used to refer to a set of capabilities defined by Adobe Systems for its PostScript Level 2 page description language. These capabilities, among others, are implemented in this product through a QMS-developed emulation that is compatible with Adobe's PostScript Level 2 language. Intellifont/Agfa Division, Miles, Inc. Apple, AppleTalk, ImageWriter, LaserWriter, Macintosh, EtherTalk, and LocalTalk/Apple Computer, Inc. Centronics/ Centronics Data Computer corporation. DEC, DECnet, VMS/Digital Equipment Corporation. Hewlett-Packard, HP, PCL, HP-GL, LaserJet/Hewlett-Packard Co. IBM PC, AT, PC/XT, Token-Ring/International Business Machines Corporation. ITC Avant Garde Gothic, ITC Zapf Chancery, ITC Bookman and ITC Zapf Dingbats/International Typeface Corporation. Helvetica, Palatino, and Times/Linotype-Hell AG and/or its subsidiaries. Intel/Intel Corporation. Microsoft, MS-DOS, Windows/Microsoft Corporation. Gothic Medium BBB and Ryumin Light KL/Morisawa and Company, Ltd. Novell and NetWare/ Novell, Inc. UNIX/UNIX Systems Laboratories, Inc. Ethernet and Xerox/Xerox Corporation. The ENERGY STAR logo/United States Environmental Protection Agency. The ENERGY STAR emblem does not represent EPA endorsement of any product or service.

Proprietary Statement

The digitally encoded software included with your QMS 1060E Print System is Copyrighted © 1995 by QMS, Inc. All Rights Reserved. This software may not be reproduced, modified, displayed, transferred, or copied in any form or in any manner or on any media, in whole or in part, without the express written permission of QMS, Inc.

Copyright Notice

This manual is Copyrighted © 1995 by QMS, Inc., One Magnum Pass, Mobile, AL 36618. All Rights Reserved. This manual may not be copied in whole or in part, nor transferred to any other media or language, without the express written permission of QMS, Inc.

Contents

1 Introduction

Introduction **1-2**

About This Manual **1-2**

Typographic Conventions 1-3

2 Consumables

Introduction **2-2**

Preventing Print Media Jams **2-2**

Loading the 500-Sheet Cassette **2-3**

Loading the Multipurpose Tray 2-9
Envelopes: Special Considerations 2-11
Labels: Special Considerations 2-13
Letterhead and Memo Paper: Special Considerations 2-15
Transparencies: Special Considerations 2-16
Thick Paper or Card Stock 2-17

About Toner Cartridges 2-18
Installing and Storing the Toner Cartridge 2-18
Toner Cartridge Life 2-19
Extending Toner Cartridge Life 2-19
Replacing a Toner Cartridge 2-20

3 Advanced Printing Features

Introduction 3-2

Chaining Cassettes 3-2
How to Chain Cassettes 3-2
Collating Output 3-3
Chunk Collation 3-5
Advantages of Collation 3-5
Collating PCL 5 Files 3-6

Working with Status Pages 3-6
Identifying a Status Page Type 3-6
Printing a Status Page 3-7

Cancelling/Ending Print Jobs 3-7
Cancelling a Print Job 3-8
Ending a Print Job 3-8

4 Printer Maintenance

Introduction 4-2

Handling the Printer 4-2

Cleaning the Printer 4-4
Cleaning Guidelines 4-4
Cleaning the Outside of the Printer 4-4
Cleaning the Inside of the Printer 4-5

5 Print Quality

Introduction **5-2**

About Print Density **5-2**

About Gamma Correction **5-2**

About Halftone Types **5-3**

High-Resolution Printing **5-4**
Setting the Resolution 5-4
How Much Memory Do You Need? 5-5

6 Troubleshooting

Introduction **6-2**

Automatic Jam Recovery **6-2**

Clearing Media Jams **6-2**
Locating Print Media Jams 6-2
Clearing Inside Upper Unit Area Jams 6-3
Clearing Cassette Area Jams 6-5
Clearing Multipurpose Tray Area Jams 6-6
Clearing Output Tray Jams 6-7

Status Messages **6-7**

Service Messages **6-10**
HP-GL Error Codes and PCL Error Codes 6-11

Printer Problem Checklist **6-11**
IBM PC and Compatible Computer Checklist 6-14
Apple Macintosh Checklist 6-14
Control Panel Problems 6-16
Data Indicator Stays Lit 6-16
Paper Jam Message Stays On 6-16

Emulation Problems **6-17**
PostScript Level 1 6-17

Output Problems 6-17
600x600 dpi Printing Unavailable 6-17
Binary Data Printing Problem 6-17
Ethernet Interface Printing Problem 6-18
Blank Page 6-18
End-of-Document (EOD) Command Problems 6-19
Multiple Pages Problem 6-19
NetWare Banner Page Job Does Not Print 6-20
Not All Pages Print 6-20
Orientation Problem 6-20
PostScript Error with Error Handler Enabled 6-20

General Printer Problems 6-21
No Start-up Page 6-21
Advanced Status Page Won't Print 6-21
Printer Resets 6-22

Disk Problems 6-22
IDE Internal Hard Disk Not On Line 6-22
External SCSI Hard Disk Not On Line 6-23

Font Problems 6-23
Can''t Download Fonts 6-23
Can't Access Fonts 6-24
Intellifont Fonts Don't Appear on Status Page 6-24

Print Quality Problems 6-25
General 6-25
Specific 6-25

Placing a Service Call 6-32

A QMS Customer Support

Sources of Support A-2
Your QMS Vendor A-2
Your Application Vendor A-2
Q-FAX A-2
The QMS Corporate Bulletin Board System A-3
CompuServe A-3
Internet A-3
QMS Customer Response Center (CRC) A-4
QMS National Service A-5

QMS World-wide Offices A-6

Index

1

Introduction

In This Chapter . . .

- About this manual
- Typographic conventions

Introduction

This manual provides information you may need only once in a while. Use it in conjunction with your other QMS 1060E Print System documentation.

Here is a brief overview of the *Operation* guide.

About This Manual

The information in this manual is divided into the following sections:

1	**Introduction**	Provides an overview of the manual.
2	**Consumables**	Describes how to load paper in the 500-sheet cassettes and multipurpose tray, how to load labels and transparencies, and how to replace the toner cartridge.
3	**Advanced Printing Features**	Explains how to print on both sides of a sheet of paper, chain cassettes, collate output, print a status page, and cancel or end print jobs.
4	**Printer Maintenance**	Describes how to handle and clean the printer.
5	**Print Quality**	Shows how to improve print quality through a discussion of print density, print resolution, and gamma correction.

6 Troubleshooting	Provides media jam prevention tips, explains how to locate and clear media jams, lists printer status messages, outlines printer and print quality problems and solutions, and describes how to place a service call.
A QMS Customer Support	Provides world-wide product sales and support telephone numbers and describes how to communicate with QMS through the QMS Bulletin Board, CompuServe, the Internet, and Q-FAX.

Typographic Conventions

The following typographic conventions are used throughout this manual:

`Mixed-Case Courier`	Text you type, and messages and information displayed on the screen
`Mixed-Case Italic Courier`	Variable text you type; replace the italicized word(s) with information specific to your printer or computer
`UPPERCASE COURIER`	Information displayed in the printer message window
lowercase bold	PostScript operators and DOS commands
lowercase italic	Variable information in text and PostScript variables
UPPERCASE	File and utility names
↵	Press the Enter key (PC) or Return key (Macintosh)
^	Press and hold down the Ctrl key (PC)

» **Note:** *Notes contain tips, extra information, or important information that deserves emphasis or reiteration.*

▲ **Caution:** *Cautions present information that you need to know to avoid equipment damage, process failure, or extreme annoyance.*

WARNING! *Warnings indicate the possibility of personal injury if a specific procedure is not performed exactly as described in the manual.*

ACHTUNG! *Bitte halten Sie sich exakt an die im Handbuch beschriebene Vorgehensweise, da sonst Verletzungsgefahr bestehen könnte.*

❖

2

Consumables

In This Chapter . . .

- Preventing media jams
- Loading and using media in the 500-sheet cassette
- Loading and using media in the multipurpose tray
- Replacing the toner cartridge

Introduction

This chapter describes the following:

- How to prevent media jams.
- How to load the 500-sheet media cassette and the multipurpose tray.
- How to load paper, transparencies, envelopes, labels, thick paper, and card stock.
- How to replace the toner cartridge in the printer.

Preventing Print Media Jams

Many printer problems are caused by improper handling of media. There are several things you can do to reduce the chance of media jamming in your printer:

- Use paper, transparencies, envelopes, cardstock, and labels that meet the guidelines set for the printer. (See the “Consumable Supplies” section of appendix B, “Technical Specifications,” in the *Reference*, for more complete information.)
- Make sure the media is not folded or wrinkled.
- Do not overfill the multipurpose tray or the cassette. The multipurpose tray holds about 150 sheets of 20 lbs (75 g/m^2) paper, 50 transparencies, 10 envelopes, 50 sheets of letterhead or thick paper, or 50 labels; the standard cassette holds about 500 sheets of 20 lbs (75 g/m^2) paper, 100 transparencies, 120 labels, or 400 sheets of letterhead paper.
- If you have problems with multiple sheets of media feeding through the printer, remove the media from the tray or cassette and fan the edges. The sheets may be sticking together.

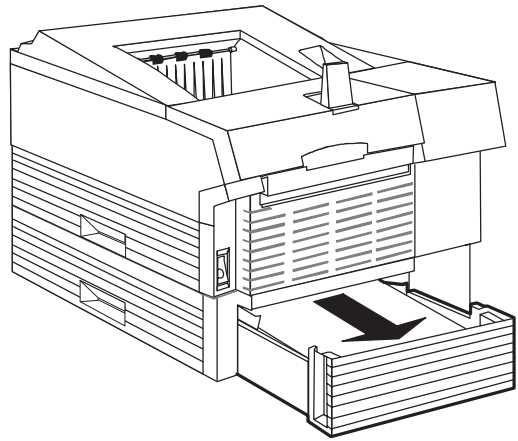
- Store media away from moisture and humidity. They may cause media to turn up at the edges or wrinkles to occur. The recommended relative humidity during operation is 15%-85%.
- Load media printing side up. The printing side of paper is indicated on the paper wrapping.

Loading the 500-Sheet Cassette

The QMS 1060E Print System comes standard with one 500-sheet letter/A4 cassette. The printer automatically pulls media from the cassette, if the cassette is selected. You may purchase an optional cassette from your QMS vendor.

» **Note:** *You should ensure that the media size matches the cassette size. Otherwise, the printed image will not be correctly placed on the page.*

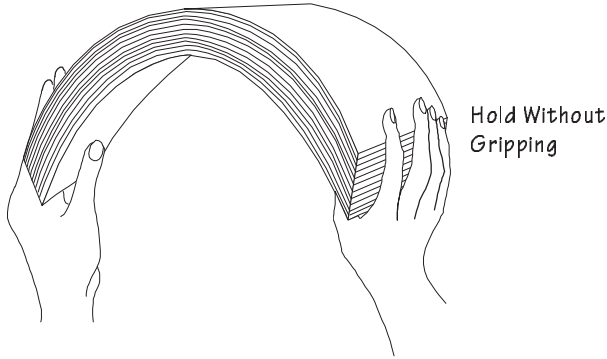
1 Slide the cassette out of the printer.



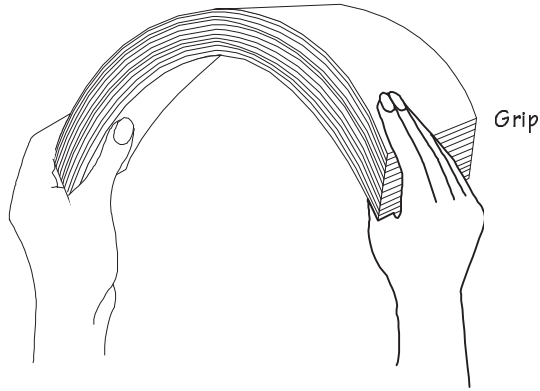
2 Load media in the 500-sheet cassette in increments so that all 500 sheets fit in the cassette and the media stack is properly leveled out.

» **Note:** *Paper is packed in reams of 500 sheets. Do not unpack the paper above the printer as this might cause particles to fall into the printer components. Note the arrows on the wrapper. They show which side of the paper should be on the top when it is loaded in the cassette.*

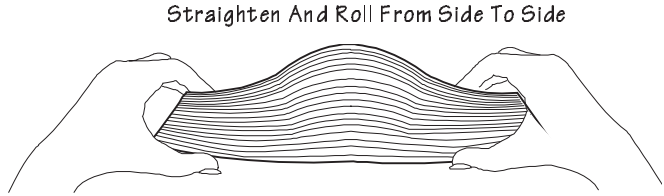
1 Unwrap the media, pull the stack out, and then with one hand at each end of the stack, lift and hold it in a curved position as shown in the following illustration.



2 Grip each end of the stack firmly.

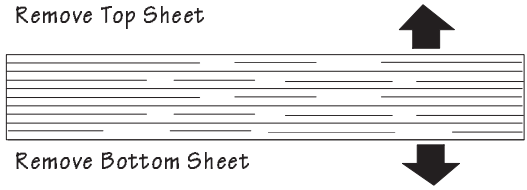


3 Straighten the stack, and then roll the fanned sheets from side to side to get air through the sheets and prevent static buildup.



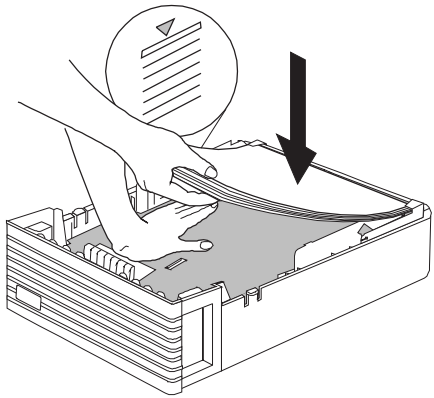
4 Take off the top and bottom sheets.

The top and bottom sheets sometimes have residual glue buildup that could cause the printer to jam.



5 Position the cassette.

The cassette has a spring in the bottom that provides some resistance when print media is placed on it. Lay the cassette flat on a hard surface and using your left hand push down on the plate in the cassette until it locks.



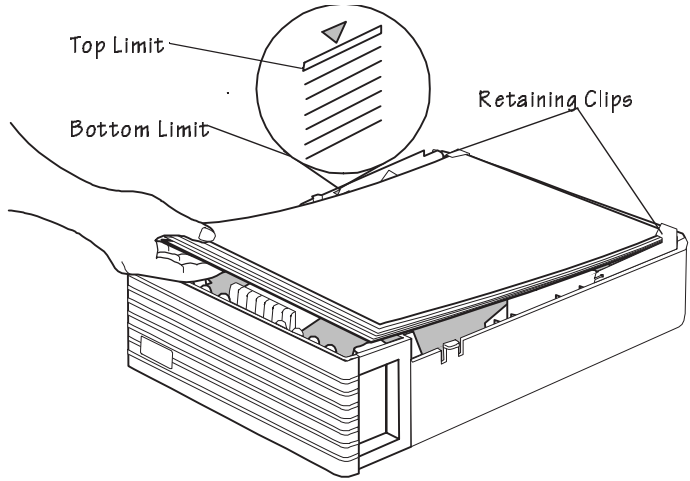
6 Load the media in the cassette.

Load the media so the edge of the stack comes against the back of the cassette in three steps as follows:

a Up to the bottom limit mark

b Halfway to the top limit mark

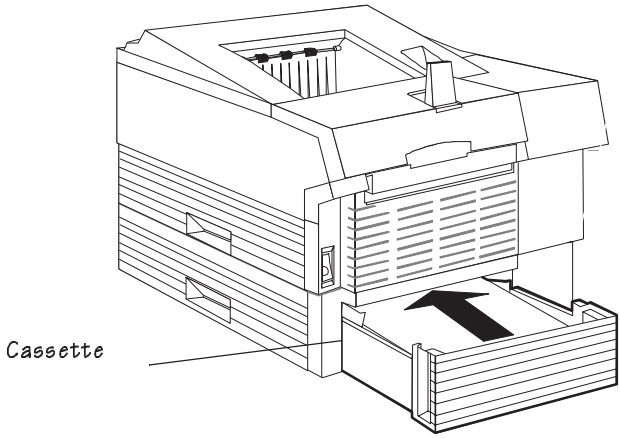
c Up to the top limit mark.



7 Ensure that the media stack lies flat, does not exceed the top limit mark, and is positioned under the retaining clips.

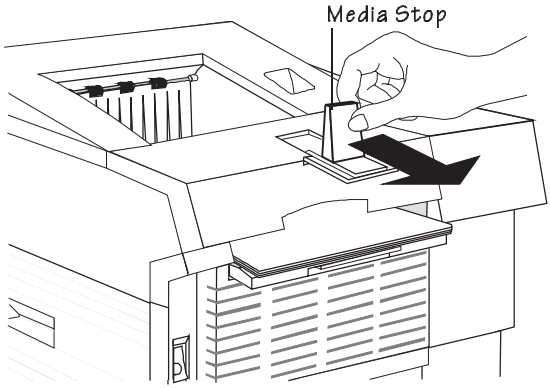
8 Slide the cassette back into the feeder.

Push the cassette straight into the cassette slot on the feeder until it's firmly seated.



9 Adjust the media stop to fit the media size.

The printer delivers your output, print-side down, to the output tray at the top of the printer. The media stop keeps the sheets positioned in the output tray.

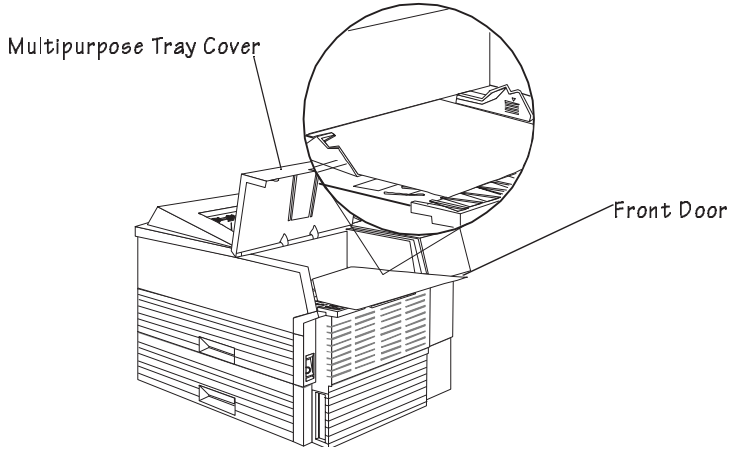


Loading the Multipurpose Tray

Use the multipurpose tray to print on paper, thick paper, letterhead, envelopes, card stock, labels, odd-sized paper (such as B5 ISO or executive), recycled paper, or transparencies. The multipurpose tray is especially useful if you want to print on a single sheet of letterhead or colored paper without changing the media in the cassette.

Load media in the multipurpose tray as follows:

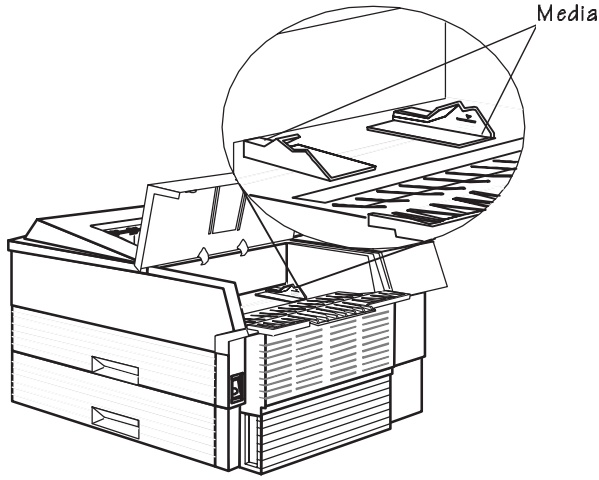
1 Lift the multipurpose tray cover to its full upright position.



2 If media size is longer than 11.7” (297 mm), open the front door. Otherwise, continue at step 3.

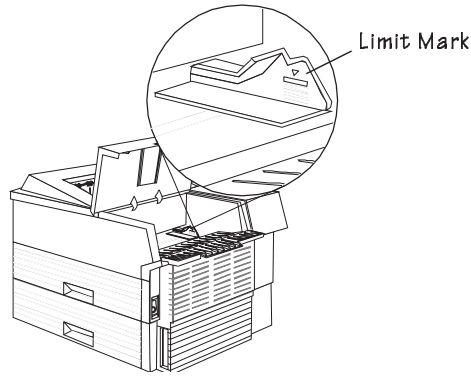
3 Adjust the media width guides to fit the media size.

» **Note:** *Remember that all media on your QMS 1060E Print System is inserted short-edge first.*



4 Align the media, and insert it print side up between the media guides sliding it as far as it will go in the printer. Make sure it doesn't exceed the limit mark and it fits firmly between the media guides.

The multipurpose tray holds about 150 sheets of 20 lb (75 g/m^2) paper (plain or recycled), 50 transparencies, 10 envelopes, 50 labels, or 50 sheets of letterhead or thick paper.

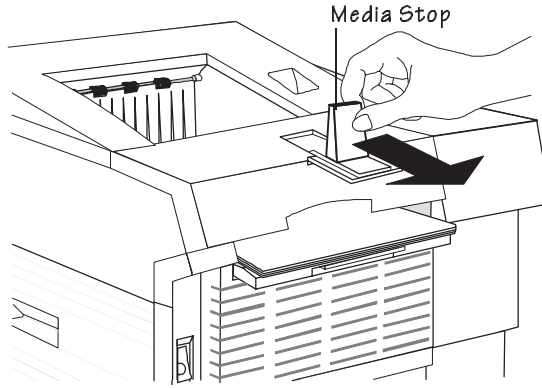


5 Check the media guides to make sure they touch the sides of the print media.

Slide the guides in until they lightly touch the right side of the stack.

6 Close the multipurpose tray cover.

» **Note:** *Do not load additional media until all the sheets in the multipurpose tray have been fed through the printer. Adjust the media stop to the correct media size.*



Envelopes: Special Considerations

The QMS 1060E Print System supports envelope printing in two ways:

- From the multipurpose tray (up to 10 envelopes)
- From the optional envelope cassette (up to 50 envelopes)

» **Note:** *The following envelopes are supported:*

- Commercial 9
- Commercial 10
- Monarch
- International C5

- International DL
- Custom

  A custom-size envelope is acceptable if it is in the following size range: 3.6" width (92 mm) to 6.65" width (176 mm)—5.86" length (149 mm) to 9.43" length (240 mm).

Your printer receives the instructions to print on envelopes from your application. Use landscape orientation to create the envelope text in your application short-edge first, set the multipurpose tray or cassette to the correct envelope size, and load the envelope short-edge first. When formatting data for envelopes, leave a 0.6" (15 mm) margin from the edges of the envelope. Print on the front side only. Some parts of the envelope consist of three layers of paper—the front, back, and flap. Print in these layered regions may be lost or faded.

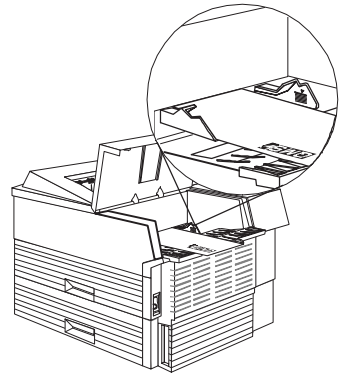
(See your application documentation for specific information on printing envelopes and see chapter 4, “Printer Configuration,” of the *Reference* for information on how to set the envelope size.)

Printing Envelopes from the Multipurpose Tray

Load the envelopes in the multipurpose tray the same as specified for other media in the “Loading the Multipurpose Tray” section, earlier in this chapter, with the following exceptions:

- Adjust the multipurpose tray guides to fit the envelope size. Make sure the guides are not too tight, so the envelopes will not buckle. Also, make sure the envelope size and type meet the specifications listed in appendix B, “Technical Specifications,” of the *Reference*.

- Insert the envelopes into the multipurpose tray as shown below with the short-edge first, the face up, and the flap side toward the left media guide.



Because envelopes pass through heated rollers, the gummed area on the flap may seal. Open the flap immediately after the envelope passes through the printer, before the seal cools. You may then reseal it in the usual manner. The use of envelopes with emulsion-based glue avoids this problem.

Printing Envelopes from the Optional Envelope Cassette

To load up to 50 Com 9, Com 10, Monarch, C5, DL, or custom envelopes at a time, use the optional envelope cassette. Instructions for installation and use are in chapter 6, “Printer Options,” of the *Reference*. See your QMS vendor for information on purchasing the optional envelope cassette.

Labels: Special Considerations

Your printer supports label printing in two ways:

- From the multipurpose tray (up to 50 sheets)
- From a cassette (standard or optional—up to 120 sheets)

Adhesive label stock has pressure-sensitive (peel and stick) adhesive backing. A label consists of a face sheet, the adhesive, and the carrier sheet. The face sheet printing surface must adhere to the plain paper specifications described in appendix B, “Technical Specifications,” of the *Reference*.

The label printing surface must cover the entire carrier sheet, and no adhesive should come through on the surface. The adhesive and carrier sheet must withstand the fusing temperature (200°C/392° F).

The following label stock is qualified for use in this printer:

- Avery 5260/5160 (1" x $2\frac{5}{8}$")
- Avery 5261/5161 (1" x 4")
- Avery 5262/5162 ($1\frac{1}{2}$" x 4")
- Avery 5163 (2" x 4")
- Avery 5164 ($3\frac{1}{3}$"x 4”)
- Avery 5165 (uncut sheet)

Format the information that is to print on the label from within your application. Try printing the formatted information on a plain sheet of paper first to check placement.

(See your application documentation for specific information on printing labels.)

Printing Labels

Load the labels in the multipurpose tray or the cassette the same as specified for other media in the “Loading the 500-sheet Cassette” and “Loading the Multipurpose Tray” sections, earlier in this chapter, with the following exceptions:

- Adjust the multipurpose tray guides to fit the label size. Also, make sure the label size and type meet specifications listed in appendix B, “Technical Specifications,” of the *Reference*.
- Insert the labels short-edge first printing and surface up.

Letterhead and Memo Paper: Special Considerations

Your printer supports the printing of letterhead or memo paper in two ways:

- From the multipurpose tray (up to 50 sheets)
- From a cassette (standard or optional—up to 400 sheets)

The letterhead and memo paper must adhere to the media specifications described in appendix B, “Technical Specifications,” of the *Reference*.

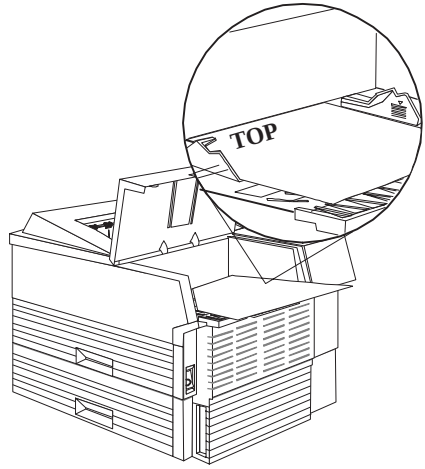
Format the information that is to print on letterhead or memo paper from within your application. Try printing the formatted information on a plain sheet of paper first to check placement.

(See your application documentation for specific information on printing.)

Printing a Letter or Memo

Load the letterhead or memo paper in the multipurpose tray or the cassette the same as specified for other media in the “Loading the 500-sheet Cassette” and “Loading the Multipurpose Tray” sections, earlier in this chapter, with the following exceptions:

- Adjust the multipurpose tray media guides to fit the letterhead or memo size. Also, make sure the media size and type meet the specifications listed in appendix B, “Technical Specifications,” of the *Reference*.
- Insert the letterhead or memo short-edge first, face up, with the top of the page facing towards the printer.



Transparencies: Special Considerations

Your printer supports the printing of transparencies in two ways:

- From the multipurpose tray (up to 50 sheets)
- From a cassette (standard or optional—up to 100 sheets)

The transparencies must adhere to the media specifications described in appendix B, “Technical Specifications” of the *Reference*.

Format the information that is to print on the transparencies from within your application. Try printing the formatted information on a plain sheet of paper first to check placement.

(See your application documentation for specific information on printing.)

Printing Transparencies

Load the transparencies in the multipurpose tray or cassette the same as specified for other media in the “Loading the 500-sheet Cassette” and “Loading the Multipurpose Tray” sections, earlier in this chapter, with the following exceptions:

- Use transparencies that can withstand the fusing temperature (200°C/392° F). We recommend 3M type PP2500 transparencies.
- Adjust the multipurpose tray guides to fit the transparency size. Also, make sure the transparency size and type meet specifications listed in appendix B, “Technical Specifications,” of the *Reference*.
- Slightly fan the stack of transparencies before loading them to prevent a jam.
- Insert the transparencies short-edge first, printing side up, with the top of the page on the left side of the tray. The correct print side is usually marked on the transparency package.
- Load up to 50 transparencies at a time in the multipurpose tray or up to 100 transparencies in the cassette. Loading a larger number of transparencies at a time may cause static buildup.
- Keep the paper path clean. Transparencies are especially sensitive to a dirty paper path. If there are shadows on either the top or the bottom of the sheets, refer to chapter 4, “Printer Maintenance,” for instructions on how to clean the printer.
- Remove each transparency from the output tray before the next sheet is printed to prevent jams or misfeeds.

Thick Paper or Card Stock

Your printer supports thick paper or card stock (90 to 157 g/m^2) printing only from the multipurpose tray (up to 50 sheets).

This media must adhere to the media specifications described in appendix B, “Technical Specifications” of the *Reference*.

Format the information that is to print on the media from within your application. Try printing the formatted information on a plain sheet of paper first to check placement.

(See your application documentation for specific information on printing labels.)

Printing on Thick Paper or Card Stock

Load this media in the multipurpose tray the same as specified for other media in the “Loading the 500-sheet Cassette” and “Loading the Multipurpose Tray” sections, earlier in this chapter, with the following exceptions:

- Adjust the multipurpose tray guides to fit the label size. Also, make sure the media size and type meet specifications listed in appendix B, “Technical Specifications,” of the *Reference*.
- Insert the media short edge first with the printing surface face up.

About Toner Cartridges

In your laser printer, characters and images are created through a process that applies toner (made of carbon particles) to the page in the printer’s fusing unit. When an image is formed a positive electrical charge is applied to transfer the image to the page. The toner cartridge contains the toner and the photosensitive drum needed to operate the laser printer.

Installing and Storing the Toner Cartridge

Installing

The cartridge is sensitive to bright light. Do not remove the toner cartridge from its protective bag until you’re ready to install it.

To install a new toner cartridge, either follow the instructions written on the toner cartridge or the instructions in the “Installing a New Toner Cartridge” section later in this chapter.

Storing

The cartridge should be

- Kept level during storage. Do not stand or store the cartridge on its end.

- Kept away from monitors, disk drives, and floppy disks. The magnets in the cartridge can damage stored data.

The shelf life of an unopened cartridge is approximately 12 months.

Refilled Toner Cartridges

QMS does not recommend using refilled toner cartridges on this printer. Refilled toner cartridges may produce variations in toner quality and reliability and may reduce the print quality of your documents. In addition, toner leaks affect your warranty.

Toner Cartridge Life

In normal printing mode, a toner cartridge lasts for approximately 5,000 letter/A4-size prints at 5% coverage (a typical full-page business letter is about 5% coverage) or 12 months after opening, whichever comes first.

Using the Administration/Engine/Conserve Toner option can further extend the toner cartridge life (see “Conserving Toner” in the next section).

Extending Toner Cartridge Life

Conserving Toner

To help you lower your printing costs, your printer has a feature called Conserve Toner, which simulates draft-quality printing. The amount of toner used during printing is reduced by screening the black dots in a 2:5 ratio. In other words, two black dots are printed for every five black dots that would be printed in normal printing mode.

Conserve Toner can be enabled through the Administration/Engine/Conserve Toner menu.

» **Note:** *Conserve Toner is designed for draft printing only. Turn Conserve Toner off when printing proof or final copies of documents to avoid any possible distortion of patterns, halftones, or images.*

Redistributing the Toner

When the toner supply is low, the printer's message window displays TONER OUT, and usually parts of the page print lighter than normal.

Sometimes you can increase the life of the cartridge by taking it out of the printer and redistributing the toner in the cartridge as described in "Installing a New Toner Cartridge," later in this section. If the TONER OUT message remains in the message window, the toner cartridge must be replaced as described in the following section.

Replacing a Toner Cartridge

You may purchase additional toner cartridges from your QMS vendor. See the "Print Engine Specifications" section of appendix B, "Technical Specifications," in the *Reference* for more information on toner cartridges.

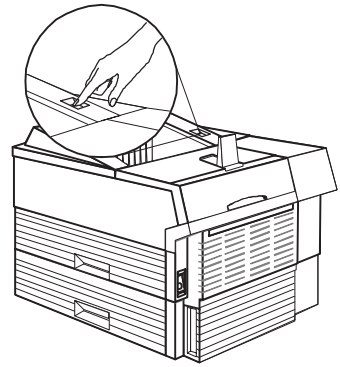
WARNING! *The fixing assembly and print delivery guide areas become extremely hot when the printer is used. Personal injury could result if you touch those areas when opening the top cover or removing the toner cartridge.*

ACHTUNG! *Die Fixiereinheit und die Papierführung werden sehr heiß, wenn der Drucker in Betrieb ist. Es besteht daher Verletzungsgefahr, wenn Sie die Abdeckklappe öffnen oder die Tonerkartusche auswechseln wollen!*

Removing the Empty Toner Cartridge

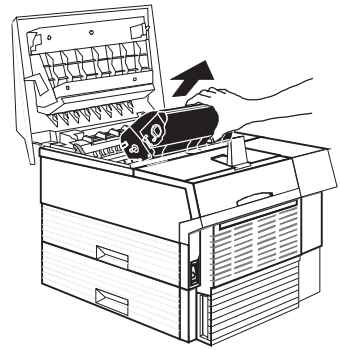
Remove the empty toner cartridge as follows:

1 Pull the release lever forward, and open the printer's top cover.



2 Remove the empty toner cartridge.

Grasping the empty toner cartridge with one hand in the grooved area, remove the cartridge by lifting it out of the printer and pulling it toward you.



Installing a New Toner Cartridge

▲ **Caution***: Toner cartridges are sensitive to bright light. Do not remove the new toner cartridge from its protective bag until you're ready to install it. Store the cartridge in an environment that is not subject to extreme heat or humidity. Keep the toner cartridge away from your computer. The magnets in the cartridge can damage data, particularly on your floppy disks.*

WARNING! *The fixing assembly and print delivery guide areas become extremely hot when the printer is used. Personal injury could result if you touch those areas when opening the top cover or installing the toner cartridge.*

ACHTUNG! *Sowohl die Fixiereinheit als auch die Papierführung werden im Druckbetrieb extrem heiß. Um Verletzungen zu vermeiden, sollten diese Druckerpartien, z.B. wenn Sie eine neue Tonerkartusche einlegen, nicht berührt werden!*

Use the following procedure to install a new toner cartridge:

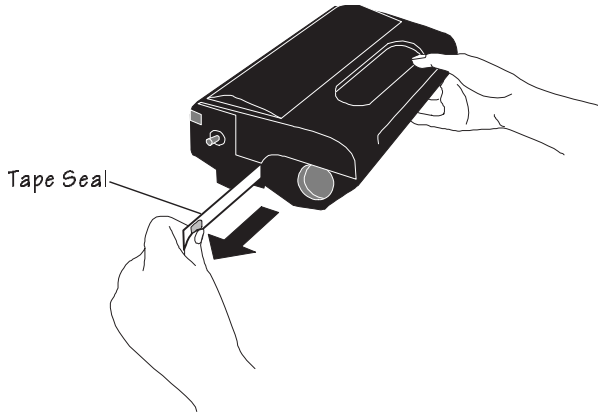
1 **Lift the toner cartridge out of its shipping carton, open the aluminum protective bag, and remove the cartridge.**

After taking the toner cartridge from its protective bag, do not open the cover or touch the PC drum of the toner cartridge because doing so may deteriorate the drum and reduce print quality.

2 **Remove the tape seal.**

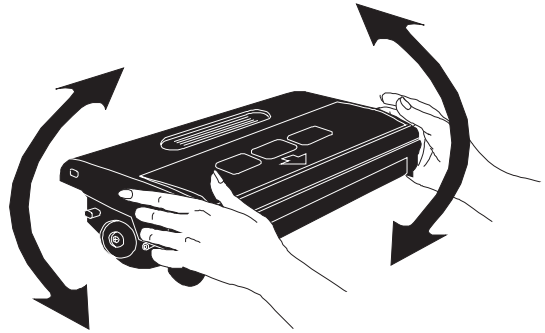
Holding the cartridge in place with your right hand, use your left hand to grasp the green tab on the left side of the toner cartridge. Pull the tab straight out (it is about 22"/539 mm long). If the tab

breaks, grasp the clear part of the tape seal and pull it straight out. Discard both the green tab and the tape seal.



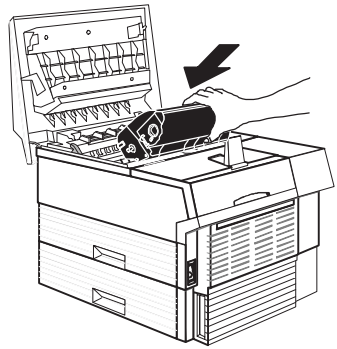
3 Distribute the toner in the cartridge.

Holding the cartridge with both hands, gently rock it from side-to-side five or six times to distribute the toner.



4 Slide the toner cartridge into the printer.

Hold the grooved area on the toner cartridge with your right hand, with the arrow on the toner cartridge facing away from you angle the cartridge down in the printer. Place the cartridge on the rails inside the upper unit of the printer, and gently slide it straight down until it is firmly seated.



5 Close the printer's top cover.

❖

3

Advanced Printing Features

In This Chapter . . .

- Chaining cassettes
- Collating output
- Printing a status page
- Cancelling a print job
- Ending a print job

Introduction

This chapter describes how to chain paper cassettes, collate output, print a status page, cancel a print job, and end a print job.

Chaining Cassettes

The QMS 1060E Print System comes standard with one 500-sheet cassette: letter/A4. You can insert only one cassette at a time in the printer unless you purchase the optional feeder and cassette that increases paper feed capacity to 1150 sheets, including the 150-sheet multipurpose tray.

You may choose to have the printer automatically draw from another cassette when the default cassette is empty. There are three ways to do this:

- Use your application if it includes a procedure for using a dual-cassette printer. Check your documentation.
- Use the PS Executive Series Utilities to configure the printer's paper source.
- Configure your printer for paper cassette chaining through the printer’s control panel. The following section contains more information.

How to Chain Cassettes

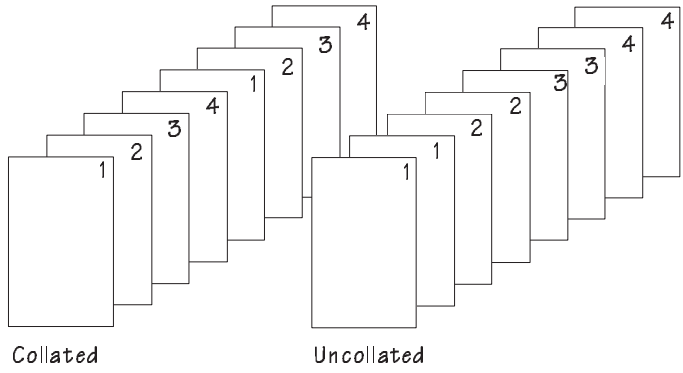
The Chain Inputbins option in the Operator Control menu allows you to “chain” inputbins (tray and cassettes) so that when the first inputbin empties, the printer automatically draws paper from another inputbin with the same size paper.

» **Note:** *The two paper cassettes must use the same size paper. For example, the standard letter cassette and an optional letter cassette, or the standard letter cassette and the multipurpose tray (set to the letter paper size).*

Menu	Operator Control/Chain Inputbins
Choices	On—Switches to the next inputbin with the same size and type of media when the default inputbin is empty. Off—Doesn't switch inputbins; uses only the default inputbin.
Default	On
Notes	Use the Operator Control/Inputbin menu to set the default inputbin.

Collating Output

Collation is the printing of sets of multiple copies of a document in numeric order. The QMS 1060E Print System is collation capable. It can deliver multiple copies of your document in collated or uncollated order to the output tray. The following illustration shows the collated and uncollated stacking for two copies of a four-page file.



To greatly improve collation performance which allows you to collate longer and more complex print jobs on the QMS 1060E Print system, you can do one of the following:

- Add more printer memory which automatically increases the Display List client's memory setting. See chapter 6, "Printer Options" of the *Reference* for information on how to install additional memory.
- Take any memory, if available and not being used by other clients, and add it to Administration/Memory/K Mem Display.

▲ **Caution:** *This option should be used only by individuals who are familiar with adjusting memory settings. Incorrect use of this option could cause your system to operate incorrectly.*

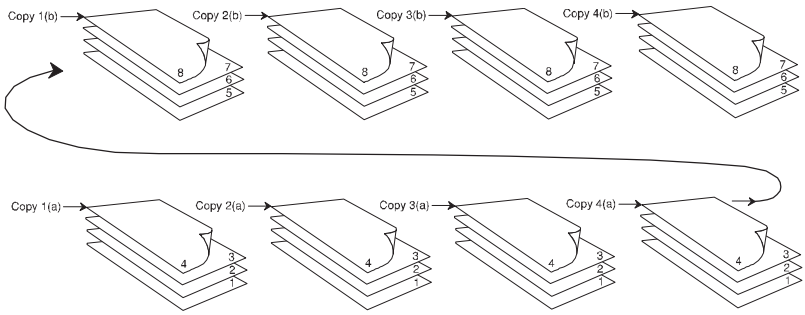
- If your printer has an optional hard disk and if Administration/Memory/Enable Disk Swap is set to On, then any extra memory is distributed to all memory clients.
- Collate through your application.

» **Note:** *Collating through your application is more time consuming than collating through the printer. The application sends the complete job the requested number of times rather than sending it once and holding data in printer memory.*

For a multiple-copy document with collation On, there must be enough Display List memory to hold the display list blocks (R1) for all pages in the collation range. (See the "Display List" memory section in the *Reference*, for detailed information on display list blocks.) If there is not enough memory, then a chunk collation boundary is forced after the last compiled page of the collation range.

Chunk Collation

This mechanism of introducing a forced boundary is known as chunk collation. Chunk collation breaks a document into several smaller, more manageable sets. For example, in the following illustration, copies “a” and “b” of each set must be manually combined to create one collated document. The order of printing is copy 1(a), copy 2(a), copy 3(a), copy 4(a), copy 1(b), copy 2(b), copy 3(b), and copy 4(b)..



Advantages of Collation

The main advantages of collation are user convenience and the time savings derived from not having to separate and sort individual copies of a print job. Each copy of the print job exists as a whole set unless chunk collation has occurred.

If chunk collation does occur, it may be best to use a header and trailer page to determine the beginning and end of each collation sequence. (See chapter 4, “Printer Configuration,” of *Reference* for information on using header and trailer pages.)

Collating PCL 5 Files

PCL 5 allows you to set the number of copies you want to print per page rather than per file. When collation is turned off, the printer prints the requested number of copies for each page. However, when collation is turned on, the printer looks at the number of copies for the first page and prints that number of copies for each page.

Example—You have a 3-page PCL 5 file and specify 3 copies of page 1, 1 copy of page 2, and 2 copies of page 3.

- With collation turned off, the pages print in the following order: 1, 1, 1, 2, 3, 3.
- With collation turned on, the pages print in the following order: 1, 2, 3, 1, 2, 3, 1, 2, 3.

Working with Status Pages

Printing a status page is a two-step procedure: Identify the type of status page you want to print, and then print it.

Identifying a Status Page Type

Two types of status pages are available:

1 **Standard—**This one-page document provides

- printer identification (the printer's name, firmware information, and number of sheets printed)
- printer settings (printer set-up options for paper handling)
- current memory configuration (printer memory settings)
- timeouts (printer timeout settings)
- communication settings and input buffer sizes (host-printer communication settings, including spooling memory sizes)
- tickmarks in the lower-left corner for image alignment

2 **Advanced—**This document, which can be five or more pages long, contains

- all the information from the standard status page
- the configuration menu settings
- a full list of fonts and downloaded emulations

Menu	Administration/Special Pages/Status Page Type
Choices	Standard, Advanced
Default	Standard

Printing a Status Page

After you have identified the type of status page to print, send it to the printer in one of the following ways:

- Press the Status Page key on the control panel
- Use the PS Executive Series Utilities. See its online help for more information on printing a status page.

Cancelling/Ending Print Jobs

The Cancel key has two functions:

- It cancels or ends all jobs with a printing, interpreting, terminating, or spooled status.
- It allows you to send an end-of-job indicator to a currently compiling print job waiting on incoming data.

You don't have to press the Online/Offline key before using the Cancel key. There are no equivalent functions in the configuration menu.

» **Note:** *If you need to cancel the cancel print job or end print job procedure, press the Cancel key.*

Cancelling a Print Job

Press the control panel keys in the order shown in the following instructions to cancel a print job.

Press this key...	to...	For 1.5 seconds, the message window reads...	and then it reads...
Cancel	Access the CANCELLING JOB menu, which prompts you for confirmation that you want to cancel the print job.	CANCELLING JOB?	YES
Cancel or Select	Select Yes.		YES
	Cancel all jobs with a printing, interpreting, spooled, or terminating status. The CANCELLING JOB message displays until the print jobs are completely removed.		CANCELLING JOB

▲ **Caution***: Keep in mind that all jobs with a printing, interpreting, or terminating status are cancelled.*

Ending a Print Job

» **Note:** *This procedure does not end print jobs that are still receiving data. Its only purpose is to provide an end-of-job indicator for a print job that does not have one. You can identify an end-of-job indicator in the Administration/Communications/Parallel and Administration/ Communications/Serial menu. (See chapter 4, "Printer Configuration," in the Reference for more information). Also see chapter 5, "Additional Technical Information," in the Reference for a complete discussion of End Job Mode.*

When the message window displays a scrolling message reading

```
WAITING ON INPUT     END JOB?
```

press the control panel keys in the order shown in the following instructions to end a print job.

Press this key...	to...	For 1.5 seconds, the message window reads...	and then it reads...
Cancel	Access the Cancelling Job menu.	CANCELLING JOB?	YES
Next	Advance to the End Job option.		END JOB
Cancel or Select	Select End Job.		END JOB IS SELECTED

» **Note:** *Shaded table cells indicate that the message scrolls.*

❖

4

Printer Maintenance

In This Chapter . . .

- Handling the printer
- Cleaning the printer

Introduction

Blurred or splotchy prints and paper jams can result from dusty printer parts. Regular cleaning takes only a few minutes and helps ensure print quality. Printer parts that require cleaning are the paper pick-up rollers and the outside surface of the printer.

This chapter describes how to handle and clean the printer.

Handling the Printer

Handle the printer with care to preserve its life. Abuse may cause damage. Keep the following guidelines in mind:

- Do not place anything on the top of the printer.
- Do not place anything on the multipurpose tray except the media being used for printing.
- Do not leave the printer open for any length of time, especially in well-lit places; light may damage the toner cartridge.
- Wait until the printer has cooled down before covering it with a dust cover.
- Lift the printer from the bottom only, using the grips. Make sure two people are available to lift the printer when moving it.

WARNING! *Remember that the media feeders on the bottom of the printer stack are not attached to the printer. Make sure you lift the printer by the carrying grips on the bottom-most unit in the stack. If the top unit is lifted alone, the bottom units could fall off, causing bodily injury or damage to the printer. If you need to lift just the top unit, use the grips and make sure it detaches completely from the cassette below before moving it to the side.*

ACHTUNG! *Bitte beachten Sie, daß die Papierzuführungen unterhalb des Druckers nicht fest mit dem Drucker verbunden sind. Wenn Sie das gasamte Gerät hochheben wollen, greifen Sie deshalb in die Griffmulden der untersten Papierzuführung. Wenn Sie nur den Drucker hochheben, kann es sein, daß die Papierzuführung sich löst und herunterfällt. Dabei können Sie sich verletzen und der Drucker kann beschädigt werden. Deshalb versichern Sie sich, daß die Papierzuführung nicht mehr mit dem Drucker verbunden ist bevor Sie diesen Drucker an einen anderen Platz stellen. Benutzen Sie unbedingt die Griffmulden am Drucker, wenn Sie ihn transportieren wollen.*

- Keep media in the output tray at minimum level. If the media stacks too high, your printer may experience media jams and excessive media curl.
- Do not attempt to lubricate or disassemble the printer.
- Store the printer under the following conditions when it's not going to be used for an extended period:
  - Unplug the printer.
  - See the "Environmental Requirements" section of appendix B, "Technical Specifications," in the *Reference* guide, for storage specifications.
  - Remove the toner cartridge from inside the printer. After removing the cartridge from the printer, return it to the aluminum bag in which it was originally packaged or wrap it in a thick cloth to protect it from direct sunlight or any other bright light.

Cleaning the Printer

Fine particles of dust from the paper may accumulate inside the printer. This could affect the printer's performance. So the printer should be cleaned on a regular basis to prevent potential malfunctions. You need to clean only the following areas:

- The paper pick-up rollers inside the printer
- The plastic housing outside the printer
- The external parts of the printer

Cleaning Guidelines

WARNING! *Unplug the printer's power cord before cleaning the printer.*

ACHTUNG! *Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen.*

In addition to unplugging the printer, follow these guidelines when cleaning the printer:

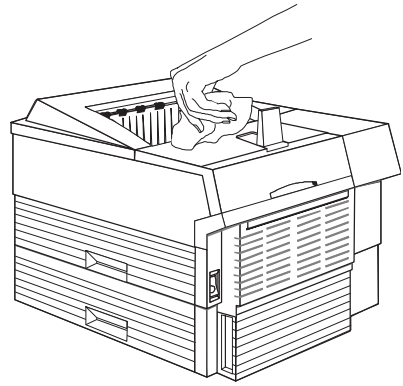
- Clean the printer before use or allow a few minutes after unplugging it so that the fusing unit can cool down.
- Do not leave moisture inside the printer. Allow all parts to dry thoroughly before closing the printer cover.
- Use a soft, lint-free cloth.

Cleaning the Outside of the Printer

WARNING! *Unplug the printer's power cord before cleaning the printer.*

ACHTUNG! *Ziehen Sie den Netzstecker aus der Steckdose bevor Sie den Drucker reinigen.*

To protect and maintain the appearance of your printer, wipe the cover and external parts with a soft, slightly damp cloth that has been soaked in a neutral cleaning solution.



Cleaning the Inside of the Printer

WARNING! *Unplug the printer's power cord before cleaning the printer and ensure that the fusing unit has cooled down.*

ACHTUNG! *Entferne Sie den Netzstecker und lassen Sie die Heizung abkühlen, bevor Sie den Drucker reinigen.*

To maintain clear, crisp print quality, clean the paper pick-up rollers beneath the toner cartridge and in the media cassettes and the window glass of the print head unit:

- Every time the toner cartridge is changed.
- Whenever print quality becomes unsatisfactory.

Procedure

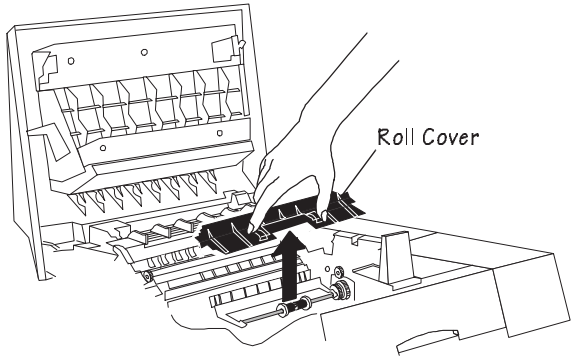
1 Remove the toner cartridge.

This procedure is described in chapter 2, “Consumables,” of this manual.

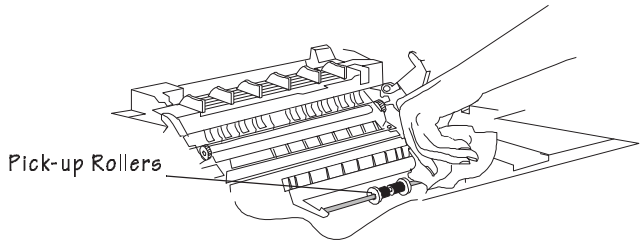
» **Note:** *If you plan to reinstall the toner cartridge, put it back in its aluminum bag or a desk drawer, or cover it with a thick cloth while cleaning the interior of the printer. The toner cartridge can be damaged by exposure to light.*

2 Remove the roll cover inside the printer

Using your right hand, push in on the grooved area of the black plastic roll cover and lift it up and away from the printer.



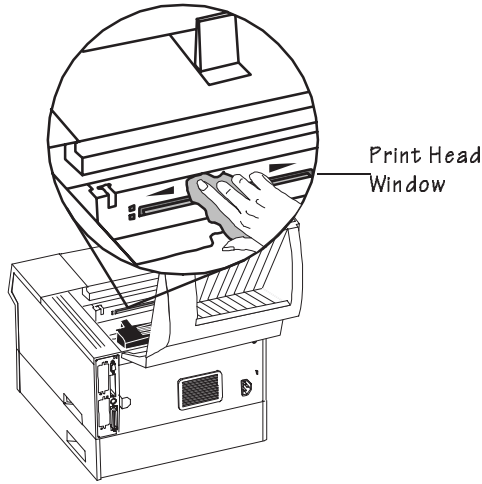
3 Wipe the pick-up rollers with a soft cloth dampened with water.



- In the main body of the printer, the black rubber Pick-up Rollers are located in the center bottom of the printer.
- In the cassettes, the rollers are white plastic and are located at the center top of the cassette.

▲ **Caution:** *Clean only the exposed surface. Do no use a cloth dampened with any type of alcohol. Do not rotate the rollers or attempt to remove them.*

4 Clean the window glass of the print head using a soft cloth.



You can see the window glass if you face the printer from its rear. If the glass is especially dirty, use a cloth dampened with ethyl alcohol.

5 Replace the toner cartridge.

This procedure is described in chapter 2, “Consumables,” of this manual.

❖

5

Print Quality

In This Chapter . . .

- Adjusting print quality
- Setting gamma correction and halftone type
- High-resolution printing

Introduction

This chapter describes how to improve print quality. Density, gamma correction, screen frequency, and screen angles are some of the factors that affect print quality. Your QMS 1060E Print System is a multi-resolution printer. This technology gives you more flexibility to control the print quality factors.

About Print Density

Print density is the amount of toner placed on the page, making the print appear lighter or darker. The higher the density, the darker the print looks and the higher the contrast is on the page.

» **Note:** *Remember that the print may also appear lighter on the page if Conserve Toner (Administration/Engine/Conserve Toner) is set to On.*

Print density is selected through a control panel menu. If the print is too dense, you can lower the density setting; if it is too light, you can raise the density setting.

Menu	Administration/Engine/Print Density
Choices	0—Lowest density to 6—Highest density
Default	3

About Gamma Correction

Gamma correction is the compression or expansion of the ranges of dark or light shades in a printed image to provide the best copy of scanned images. Through manipulation of shading levels, your printer can be set to improve the print quality of scanned images

automatically. For detailed information on this process, see chapter 5, “Additional Technical Information,” in the *Reference* guide.

The main benefit of gamma correction is that it improves the output quality of a scanned image by improving halftoning at a given resolution. To get the best gray-scale PostScript image at any resolution, gamma correction should be turned On. You can set gamma correction through the PS Executive Series Utilities or through the control panel.

Menu	Administration/Emulations/PostScript/Gamma Correction
Choices	No—Disables gamma correction. Yes—Enables gamma correction.
Default	No
Notes	Gamma correction is automatically adjusted when you change your printer’s resolution, if this option is set to Yes. Gamma correction applies only to PostScript images. If turning on gamma correction doesn’t yield a suitable gray-scale image for your needs, set a specific gamma correction value through your drawing application or through the PostScript **settransfer** operator. (See your drawing application documentation or the *PostScript Language Reference Manual* for more information.)

About Halftone Types

Your printer provides two different types of halftones—basic and advanced. These two options allow you to customize the smoothness of the printed image according to the number of grayscales it uses.

Menu	Administration/Emulations/PostScript/Halftone Type
Choices	Basic—Regular dot placement at 53 lpi for 300x300 resolution or 71 dpi for 600x600 resolution. Advanced—Variable dot placement according to the grayscales within the image. Generally, this option provides smoother transitions between grayscales within the image.

Default	Advanced
Notes	When the Advanced halftone type is chosen, gamma correction (Administration/Emulations/PostScript/Gamma Correction menu) has no effect on the image.

High-Resolution Printing

The QMS 1060E Print System supports two print resolutions: 300x300 and 600x600 dpi (dots per inch). For printed pages that don't require optimum print quality, such as rough drafts, memos, or text-only pages without graphics (dependent on shading details), you may choose to set the printer at 300 dpi. Printing at 300 dpi reduces the amount of processing time the printer requires before printing the page. For pages that demand high-quality output, especially those containing detailed graphics or varying background shades, you'll want to set the printer resolution to 600 dpi.

Setting the Resolution

You can select 300 or 600 dpi from the following menu:

Menu	Administration/Engine/Def. Resolution
Choices	300 dpi—300x300 dpi resolution. 600 dpi—600x600 dpi resolution.
Default	600 dpi

Your printer offers greatly improved print quality at 600 dpi. To take best advantage of 600 dpi use

- The resident typefaces (or optional Intellifont SIMMs)
- The software printer drivers designed for your printer

» **Note:** *Whenever possible, set the print resolution through your application. If the print resolution can't be set through the application, set it through the printer control panel, through the PS Executive Series Utilities, through QMS Document Option Commands, or through a remote console session.*

How Much Memory Do You Need?

Your 1060E printer comes with 8 MB of memory, more than enough to print all supported page sizes at 300 dpi, and all page sizes except legal at 600 dpi.

You may need additional memory (SIMMs) for the following:

- To print legal-size pages at 600x600 dpi
- To print complex graphics or complex PostScript documents
- Increased collation performance
- Increased spooling performance

See chapter 6, "Printer Options," of the *Reference* guide, for more information on installing SIMMs.

❖

6

Troubleshooting

In This Chapter . . .

- Preventing media jams
- Removing media jams
- Responding to status messages
- Problem checklist
- Print quality problems
- Placing a service call

Introduction

This chapter offers media jam prevention tips, explains how to remove media jams, lists and explains many control panel messages, outlines possible printer and print-quality problems and solutions, and explains how to place a service call.

Automatic Jam Recovery

With most printers, if a jam occurs, you must remove the jammed media and then reprint the job. However, the QMS 1060E Print System provides automatic jam recovery, if enabled, through the Administration/Engine/Page Recovery menu. The option must be set to On for automatic reprinting of a jammed page to occur. If a media jam occurs when the Page Recovery option is set to On, remove the jammed media, and the printing automatically resumes from the page the printer stopped at when the jam occurred.

» **Note:** *For automatic jam recovery to work, it is necessary to leave the printer turned on when you remove the jammed media. After the jam is cleared, open and close the top cover once before printing. Printing will not resume until you do this.*

Clearing Media Jams

Locating Print Media Jams

When print media jams occur, a PAPER JAM message displays in the message window. Frequent jams in any area indicate that area should be checked, repaired, or cleaned. Repeated jams may also happen if you are using the wrong weight print media. (See the “Print Media” section of appendix B, “Technical Specifications,” in the *Reference* guide, for print media specifications.)

Print media jams can occur in any of the following areas:

- Inside upper unit
- Standard or optional cassette unit
- Multipurpose tray
- Output tray

Jams can occur in more than one location at a time, so be sure to check all these locations.

» **Note:** *After clearing the jam, always open and close the top cover once before printing. Printing will not resume until you do this.*

When printing from a cassette, check for the media jam in the cassette area.

When printing from the multipurpose tray, check for the media jam in the multipurpose tray area

Clearing Inside Upper Unit Area Jams

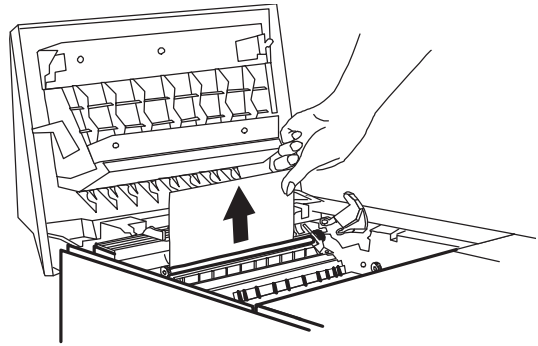
WARNING! *The fixing assembly and print delivery guide become extremely hot when the printer is used. Personal injury could result if you touch those areas.*

ACHTUNG! *Die Fixiereinheit und die Papierführung werden sehr heiß, wenn der Drucker in Betrieb ist; bei Berührung dieser Partien besteht Verletzungsgefahr!*

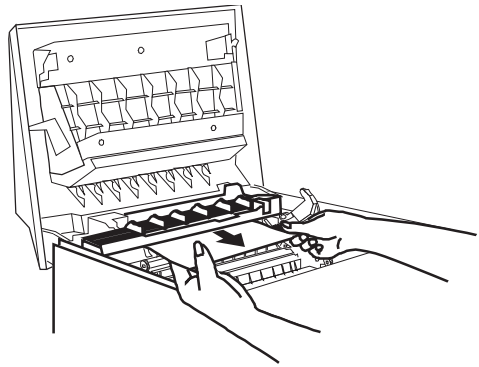
1 **Open the printer's top cover.**

2 **Raise the roller release plastic sheet and remove the jam from the upper unit as follows:**

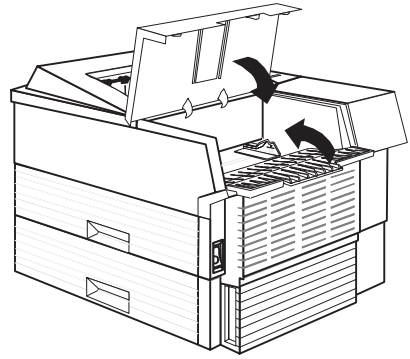
- If the edge of the paper has not been fed in the fusing unit, remove the paper by pulling it in the following direction:



- If the edge of the paper has been fed in the fusing unit, remove the paper by pulling in the following direction:



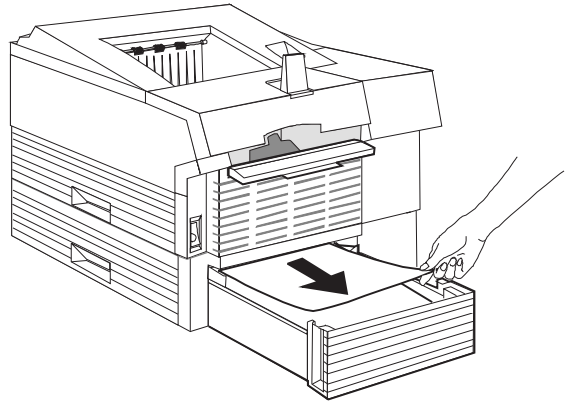
3 Close the printer's top cover and the multipurpose tray cover (if opened). The printer resets itself and continues operation.



Clearing Cassette Area Jams

1 Determine which cassette is currently being used and remove it.

2 Check the cassette pick-up roller area, and remove any jammed print media that remains outside the main unit.



3 **After replacing the cassette, open the printer's top cover, and then close it again to reset the paper jam message.**

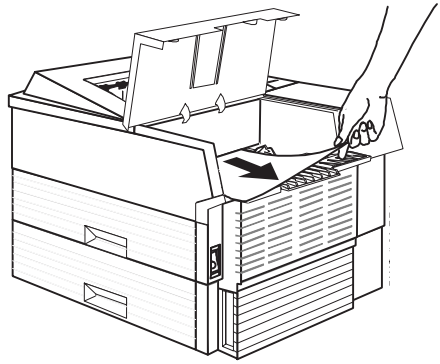
The printer resets itself to continue operations.

Clearing Multipurpose Tray Area Jams

» **Note:** *Leaving print media in the multipurpose tray can cause the print media position to shift during removal of the jam. This may result in a media feed failure and another jam when printing is restarted.*

1 **Open the multipurpose tray cover.**

2 **Remove all print media remaining in the multipurpose tray.**



3 **If the jam has been cleared, close the multipurpose tray cover and printing will restart.**

If you are unable to locate the jam in the multipurpose tray area, check the areas for locating jams when using a cassette described earlier in this chapter.

Clearing Output Tray Jams

If media has become jammed outside the upper unit at the output tray area, clear the jam as follows:

1 **Open the top cover.**

2 **Remove the jammed piece of paper, and close the main unit.**

The printer resets itself and continues operation.

Status Messages

Status messages in the message window provide information about your printer and help you locate many problems. When the condition associated with a displayed message has changed, the message is cleared from the window.

Status messages are not displayed while the printer is off line.

The following status messages may appear in the message window:

» **Note:** *Shaded table cells indicate that the message scrolls.*	
x ACTIVE JOBS	Indicates that the printer is on line and identifies the number of jobs in process.
ADJUST *INPUTBIN* BIN	Indicates that the displayed paper cassette is not inserted correctly.
CANCELLING JOB	Indicates that the Cancel key has been pressed, and that all jobs with a printing, interpreting, or terminating status in the print queue are being canceled. Displays until the canceled print job has been removed from the queue. After the jobs are canceled, the printer resumes printing other jobs that are in the queue.

CLOSE ENGINE DOOR(S)	Indicates that the engine top cover is open and needs to be closed.
IDLE	Indicates that the printer is on line, but no jobs are in process.
IDLE INPUT PRINTING	Indicates that the printer is on line and printing jobs that are already in the queue; no new jobs are arriving at the communication interfaces.
INITIALIZING	Indicates that system is getting ready to go on line.
PAPER JAM	Indicates that media has jammed either while being pulled from the input bin, passing through the printer, or exiting from the printer into the output bin.
PRINTING STATUS	Indicates that a status page is printing. The message clears after the status page prints.
PUT *SIZE* PAPER IN *INPUTBIN* BIN	Indicates that Operator Control/ Chain Inputbins is set to Off and that the displayed cassette or tray is empty. Refill it with the specified size media. In the case of a cassette, *SIZE* is the media size detected by the engine. In the case of the tray, the *SIZE* is the media size of the tray configured in the Operator Control/ Multipurpose Sz menu. *INPUTBIN* is the empty cassette or tray (the default input bin set in the Administration/Engine/Inputbin # menu).

PUT *SIZE* PAPER IN ANY BIN	Indicates that Operator Control/ Chain Inputbins is set to On and that a chained inputbin is empty. Refill the empty inputbin with the specified paper size.
TONER OUT	Indicates that the toner cartridge is empty.
WAITING FOR IDLE	Indicates that an active print job is in process, so access to the menu is not allowed until the print job is finished. Wait until the print job is finished and the printer goes idle.
WAITING ON INPUT END JOB?	Indicates that the compiler is waiting on incoming data for the first job in the queue. The job may not have an end-of-job indicator and therefore cannot end. You may want either to cancel or to end the print job. The message clears if more input arrives from the port or if you press the Cancel key. No other jobs can be printed until this job has ended.
WARMING UP	Indicates that the printer is warming up. Wait until the `IDLE` message displays before printing.

Service Messages

The following service messages may appear in the message window:

» **Note:** *Shaded table cells indicate that the message scrolls.*	
CALL FOR SERVICE ENGINE ERROR 1	Indicates that an error has been detected with the Fuser Unit. Contact your QMS vendor.
CALL FOR SERVICE ENGINE ERROR 11	Indicates that an error has been detected with the Scanner Motor. Contact your QMS vendor.
CALL FOR SERVICE ENGINE ERROR 12	Indicates that an error has been detected with the Fan Motor. Contact your QMS vendor.
CALL FOR SERVICE ENGINE ERROR 20	Indicates that an error has been detected with the Beam. Contact your QMS vendor.

» **Note:** *A service message sometimes occurs as a result of an unusual combination of events, not because of an actual problem. When the printer stops and a service message displays in the message window, turn the printer off and then back on. This often clears the service message indicator, and printer operation resumes. Always try this before making a service call.*

Service calls should be placed to the vendor from whom you purchased the printer. If you cannot get service from your vendor, see appendix A, “QMS Customer Support,” for more information.

HP-GL Error Codes and PCL Error Codes

The following errors may occur when using the designated (HP-GL or PCL) emulation.

HP-GL Error Code	Description
0	Not enough memory for job.
1	Too many transformations.
2	Math error.
3	Job aborted.
4	Instruction not recognized.
5	Wrong number of parameters.
6	Out of range parameter, or illegal character.
7	Not used.
8	Unknown character set.
9	Position overflow.
10	Buffer overflow.

PCL Error Codes	Description
0	Not enough memory for job.
1	State lost.
2	Math error.
3	Job aborted.
4	Out of memory for macros.
5	Disk full. Cannot store fonts.
6 - 13	Internal error 1 - 8.

Printer Problem Checklist

This section contains a list of possible printer problems and solutions. If you have just installed your printer and are having problems, be sure you have correctly followed the steps outlined in the *Getting Started*.

If there is no status message in the message window, use the following steps to identify the source of your problem and to learn possible solutions:

1 Do all indicators come on when the printer power is turned on?

Yes

- Go to question 2.

No

- Is the power cord plugged into both the power outlet and the printer?
- Is the printer power switch in the On "I" position?
- Is the power outlet working?
- Does the line voltage from the power outlet match the printer's power requirements? See appendix B, “Technical Specifications,” in the *Reference* guide.

2 Can you print a status page? (The status page is printed using the Status Page key on the control panel or through the PS Executive Series Utilities.)

Yes

- Go to question 3.

No

- Does the cassette or tray have media? If it is out of media, the message `PUT SIZE PAPER IN INPUTBIN` is displayed in the control panel message window and the Error indicator is lit.
- Is the toner cartridge installed in the printer? The printer does not tell you that the toner is absent. It will power up, and either jam at the Fuser, or print a blank page.
- Is the printer top cover closed securely?
- Is there a media jam? If a `PAPER JAM` message displays and the Error indicator lights, see “Clearing Media Jams,” earlier in this chapter.

3 Is the printer receiving data from the computer?

Yes

- If the Data indicator blinks after you send a file, the printer is receiving data.

No

- Is the printer on line? The message window displays `IDLE`.
- Has the communication mode been changed from ESP (the factory default) to a dedicated mode that does not match the file you are sending?
- Print a status page from the control panel. If you are using the serial interface, is the baud rate (speed of data transmission) of the printer, the computer, and your software application program the same?
- If you still cannot identify the problem, contact your QMS vendor.

4 Is the printer printing codes or not printing at all when in ESP mode?

- Reconfigure the port to the specific printer language of the file you are trying to print. See chapter 4, “Printer Configuration,” in the *Reference* guide for instructions, or use the PS Executive Series Utilities to change modes.
- If a PostScript document prints PostScript statements while in ESP mode, decrease the ESP timeout. See chapter 4, “Printer Configuration,” in the *Reference* guide to learn how to make the change at the printer control panel, or decrease the timeout with the PS Executive Series Utilities.
- If you continue to have problems with the ESP mode selecting printer language, contact your QMS vendor.

5 Has the printer stopped printing?

- If the TONER OUT message is on, change the Administration/Engine/Toner Out Act setting to Continue.

IBM PC and Compatible Computer Checklist

If you're experiencing printing problems not related to print quality, check the following:

- Does your application setup match the printer interface settings?
- Have you set up your printer port in your AUTOEXEC.BAT file and installed a PostScript driver within your application? (Refer to your DOS and application documentation.)
- If you're using a serial interface, are you having a protocol problem? If you are using a PC, check that the PC settings match the printer settings. Set the printer to DTR/DSR protocol. If that doesn't work, check your serial interface cable. (See the "Cable Pinouts" section of appendix B, "Technical Specifications," in the *Reference* for information on cable pinouts. You may also want to try setting the printer to XON/XOFF protocol.)
- Is your application PostScript compatible? (Check the application manual.)

Apple Macintosh Checklist

If you're experiencing printing problems not related to print quality, check the following:

- Are the LaserWriter and Laser Prep files (version 6.0 or higher) installed in your System Folder or Extensions Folder?
- Have you used the Chooser to select "LaserWriter," "QMS 1060E System," or another PostScript printer?
- Is AppleTalk active in the Chooser dialog box?
- Are the screen fonts installed? (See chapter 6, "Printer Options," the "Using the LocalTalk Interface" section, in the *Reference* guide.)

Limit Check Error on a Macintosh

If a limit check error appears in the status box window when you are printing a Macintosh file, increase the printer's PS Heap memory client (Administration/Memory/PS Heap menu). See chapter 4, "Printer Configuration," of the *Reference* guide for more information on PS Heap.

LaserWriter 8.x Driver Printing Problem

If you experience problems when printing with the LaserWriter 8.x driver, switch back to the LaserWriter 7.x driver that came with your Macintosh (if available), or call Customer Technical Assurance. See appendix A, "QMS Customer Support," for the list of telephone numbers.

QMS Windows Driver Printing Problem

- If you experience problems when printing with the QMS-developed Windows driver (QSCRIPT.DRV), try using the Microsoft driver provided with Windows, along with our WPD file, which is on the Windows Drivers disk included with your printer. See the README file on the disk for information on using the WPD.
- If you experience problems when printing with the QMS-developed Windows driver (QMSPS.DRV), enable PostScript Pass-Thru on the Options buttons in the Printer Setup window.

Control Panel Problems

Data Indicator Stays Lit

- If you're downloading additional typefaces, too many can overload the printer's memory, causing the printer to reset and lose information previously downloaded to RAM or to hard disk. Make sure you have enough printer memory for the additional typefaces. Additional memory (RAM) is available and easily installed. Contact your QMS vendor for information on RAM upgrades (SIMMs). See chapter 6, "Printer Options," in *Reference* guide for installation instructions.
- On the optional AppleTalk network, Macintosh computers sometimes interfere with each other. If this happens often, reinstall the LaserWriter and Laser Prep files to reset the printer. If neither of these files is the problem, contact your QMS vendor.

Paper Jam Message Stays On

- If a PAPER JAM message displays in the control panel message window, open the printer and clear the jam. If the message is still there, try opening and closing the printer's top cover again.
- Is the toner cartridge installed in the printer? The printer does not tell you that the toner is absent. It will power up, and either jam at the Fuser, or print a blank page.
- As a last resort, try turning the printer off and on (this causes jobs to be lost).

Emulation Problems

PostScript Level 1

If you are using a Level 1 driver in your application and you have trouble printing PostScript files, try printing the files with the PostScript level set to Level 2 (Administration/Emulations/PostScript menu). See chapter 4, “Printer Configuration,” of the *Reference* guide for more information.

Output Problems

600x600 dpi Printing Unavailable

If you’ve configured the printer from the control panel to print at 600x600 dpi resolution but the printer continues printing at 300x300 dpi (Administration/Engine/Def Resolution menu), you may need additional memory allocated to the frame buffer or you may need to add additional RAM (SIMMs).

To allocate the correct amount of memory, use the Administration/ Memory/Frame Buffer menu. See chapter 4, “Printer Configuration,” in the *Reference* for more information. To install additional RAM, see chapter 6, “Printer Options,” in the *Reference* guide.

Binary Data Printing Problem

If binary data is not being interpreted correctly or if your binary print job doesn’t print, check that PS Protocol is set to the Binary or Binary Fixed mode in the following menus:

- Administration/Communications/Serial
- Administration/Communications/Parallel
- Administration/Communications/Network 2 menus

- Administration/Communications/LocalTalk (if installed)

Ethernet Interface Printing Problem

If you have trouble connecting and configuring your Ethernet interface, check the following:

- Is the printer connected to the network?
- Is the printer plugged in, turned on, and correctly configured?
- Do the printer start-up and status pages list the interface? Is the configuration information correct?
- Is the interface enabled?
- Is the appropriate protocol (or protocols) enabled?
- Are all printer and protocol addresses configured correctly?

Blank Page

- If a blank start-up page ejects or blank pages come out during a printing job, check for an empty, absent, or defective toner cartridge.

» **Note:** *Remember that there is no automatic notification if the toner cartridge is not installed in the QMS 1060E Print System, so you need to manually check to make sure the cartridge is installed.*

- Make sure you have broken the tab on the side of the toner cartridge and removed the sealing tape.
- Check to ensure that you are not using perforated paper or 3-hole punched paper. This type paper is not recommended for your printer.

End-of-Document (EOD) Command Problems

The information in this section is intended to assist you in recognizing and fixing EOD problems.

- If you add an EOD command to your file and the EOD command prints on your job, you may need to set the end job mode on the printer's control panel. See “Setting the End Job Mode for the Serial and Parallel Protocols” in chapter 5, “Additional Technical Information,” of the *Reference* for more information.
- If your QMS Crown printer is not interpreting the selected EOD command correctly for your print job, then do the following:
  - Check the syntax and spelling of the EOD command in your file or network job separator, depending on your environment.
  - Check that the end job mode on the printer's control panel and the EOD command in your file or network job separator, depending on your environment match.
  - Check with your system administrator or applications development department to ensure that you are using the standard EOD command for your organization.
- If the End Job Mode option is set to None, and if an EOD command is inserted between each print job, the EOD commands may cause the printer to select the incorrect emulation or to print the EOD command on your print job.

Multiple Pages Problem

If you’re experiencing unexpected results when printing multiple pages, try turning collation Off (Operator Control/Collation menu) so that the memory used for compressed pages can be released after it has been used. See chapter 4, “Printer Configuration,” in the *Reference* guide for more information on collation.

NetWare Banner Page Job Does Not Print

If you experience problems when printing a job using NetWare with a banner page, change the Administration/Communications/Network 2/ CrownNet/PS Protocol value to QBinary or QBinary Fixed.

Not All Pages Print

- Check the cable connecting the printer and the host. You could have the wrong kind of cable, or your printer may not be configured for the correct cable and port.
- Make sure no one pressed the Cancel key while your job was printing.
- Check the control panel message window to see if the cassette or multipurpose tray is out of paper.
- Check to see if a jam has occurred during the print job.

Orientation Problem

If you have manually set the orientation (landscape or portrait) through the control panel and your image doesn't print correctly, you may be experiencing an orientation problem. The preferred method to set orientation is through your application.

PostScript Error with Error Handler Enabled

- If you receive a PostScript error when printing a file that previously printed correctly on another PostScript printer, check the "Other Problems" section that follows for a solution. If no solution is found, then call your QMS vendor for additional error information.
- If you receive a PostScript error when printing a new file from a new application, check the "Other Problems" section that follows for a solution. If no solution is found, see the *PostScript Language Reference Manual* (Adobe Systems, Inc., Reading, MA: Addison-Wesley, 1990, ISBN 0-201-18127-4), or call your QMS vendor for additional error information.

General Printer Problems

No Start-up Page

If no start-up page prints, check the following:

1 Is the printer on line?

2 Has the start-up page been disabled? Use the printer control panel or the PS Executive Series Utilities to make sure the start-up page is on. If the start-up page is turned on, go to step 3.

3 Turn the printer off and back on again. From a cold start, it takes a minute for the printer to warm up. Be sure you wait long enough for a start-up page before suspecting a problem.

4 Check to be sure the paper cassette is in place and that there is paper in it.

5 Open the front cover of the printer and check for a media jam.

6 Make sure a toner cartridge is installed.

If you have not solved the problem, open the front cover of the printer. Hold your hand just close enough to the fixing assembly to tell whether the rollers are hot; then, with this information ready, call your QMS vendor for help.

Advanced Status Page Won't Print

When there are too many fonts downloaded to the print system, the advanced status page, if selected, won't print. Do one of the following to correct this problem:

- Decrease the number of fonts that you are downloading. When downloading a large number of fonts, packet them in smaller groups for downloading. (For example, instead of downloading 8 fonts at one time, download only 4.)
- Remove some of the downloaded fonts from the print system. Use the PS Executive Utilities application or QMS Document Option Commands to remove the unused fonts.

Printer Resets

Occasionally, Macintosh applications interfere with each other. Applications send a printer prep file to the printer at the beginning of each document. Other prep files cannot be sent without resetting the printer. Monitor your activities to see if there is a correlation between your use of a certain driver version and the printer resetting. If so, contact the application developer.

Downloading too many typefaces can overload the printer's memory and cause the printer to reset. Additional memory (RAM) or an optional hard disk is available and easily installed. Contact your QMS vendor for information on RAM upgrades. See chapter 6, “Printer Options,” of the *Reference* guide.

If the printer resets in other circumstances, call your QMS vendor for service.

Disk Problems

IDE Internal Hard Disk Not On Line

- If `DISK ONLINE` does not appear on the start-up or status page, check the IDE-SCSI ribbon cable connection to the IDE-SCSI board and to the IDE internal hard disk. (See chapter 6, the “Printer Options” section in *Reference* guide for information.)

» **Note:** *If these cable connections are properly seated, then you may have a defective disk drive or IDE-SCSI board. Contact your QMS vendor. See the list of phone numbers in appendix A, “QMS Customer Support.”*

- If your printer has only the standard memory, then you need to enable disk swapping. See chapter 4, “Printer Configuration,” in the *Reference* guide for information on how to enable this option through the Administration/Memory/Enable Disk Swap menu.

External SCSI Hard Disk Not On Line

- If `DISK ONLINE` does not appear on the start-up or status page, check the hard disk cable connections to the hard drive and to the SCSI interface port on the back of the printer. (See your hard disk drive documentation for more information.)
- Is the hard disk turned on? Check that the Power indicator is on.
- Did you turn on the hard disk before you turned on the printer. Always turn the hard disk on first, and then turn the printer on.
- Is the SCSI ID set for one of the reserved positions? Do not use the reserved positions 7, 8, and 9. Make sure each device on the SCSI chain has a unique address.
- Did you terminate a hard disk in the middle of the chain? There should be only one terminated disk in the chain, and it should physically be the last disk in the chain. (See your hard disk drive instructions for more information.)

Font Problems

Can't Download Fonts

If you experience problems with fonts not downloading correctly, the printer may have run out of memory while downloading the fonts, macros, or patterns. You can do one of the following to increase printer memory:

- Add more printer memory, which automatically increases the Disk Cache client's size. See chapter 6, "Printer Options," of the *Referenc*e guide for information on installing SIMMs.
- Take any memory, if available and not being used by other clients, and add it to the Administration/Memory/K Mem Disk Cache client.

▲ **Caution:** *This option should be used only by individuals who are familiar with adjusting memory client's values. Incorrect use of this option could cause the system to operate incorrectly.*

- Decrease the number of fonts that you are downloading. When downloading a large number of fonts, packet them in smaller groups for downloading. (For example, instead of downloading 8 fonts at one time, download 4.)
- If your printer has an optional hard disk and if Administration/ Memory/Enable Disk Swap is set to On, then any extra memory is distributed to all clients.

Can't Access Fonts

- **Have you recently performed a system upgrade (release 2.0 or later firmware) on your QMS 1060E Print System, and are now unable to access your downloaded fonts?**

  When you perform a system software upgrade (release 2.0 or later firmware) on your QMS 1060E Print System, some fonts downloaded on the hard disk are copy protected and must be re-downloaded in order for the printer to recognize them. See your font documentation for downloading instructions.

Intellifont Fonts Don't Appear on Status Page

If the Intellifont fonts don't appear on the printer start-up page and the advanced status page, check the following:

- Are the controller board connectors firmly seated?
- Is the SIMM installed in the correct socket?
- Is the SIMM installed correctly?

» **Note:** *See chapter 6, "Printer Options," in the Reference guide, for instructions on how to install the Intellifont option.*

If you have a problem you cannot resolve, contact your QMS vendor.

Print Quality Problems

General

Print quality problems are those related to the appearance of the pages you print. Print quality problems include white lines on the page, uneven blacks, and other print distortions.

If you have problems with the quality of your printed pages, try the following:

- Check the print density setting on the Administration/Engine/Print Density menu. Change the setting, and try printing another page.
- If the TONER OUT message is on and the printer continues to print, try distributing the toner to improve print quality. If the print quality does not improve, replace the toner cartridge.
- Remove the toner cartridge and rock it several times from side to side. The toner can settle, and this procedure redistributes the toner. Reinsert the cartridge and try printing again.
- Place a service call to your QMS vendor.

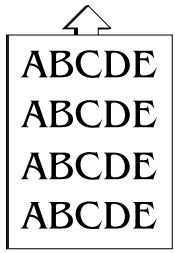
Specific

Listed below are several print quality problems with possible solutions. Try the solutions in the sequence given. If the solutions listed do not solve the problem, place a service call to your QMS vendor.

Black Image (Entire Page)

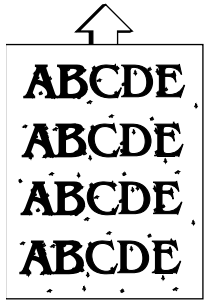
1. The toner cartridge may be defective. Remove it and install a new toner cartridge, if needed.
2. Your printer may need a service check. Contact your QMS vendor.

Printout Too Dark



1. Decrease print density by adjusting the print density through the control panel via the Administration/Engine/Print Density option.
2. If step 1 doesn't solve the problem, install a new toner cartridge.

Toner Smudges



If the toner smudges are only on the front of the page, perform steps 1 and 2.

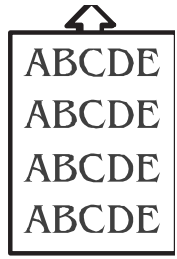
1 Distribute the toner.

2 Check to make sure the toner is not defective.

3 If steps 1 and 2 above do not solve the problem install a new toner cartridge.

If toner smudges are also on the back of the page, the image transfer roller may be dirty. Open the printer once and close it again to clean the roller.

Printout Too Light



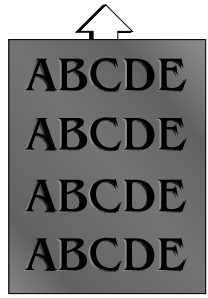
1 Check that Conserve Toner is set to Off in Administration/Engine/ Conserve Toner.

2 Increase the print density by adjusting the print density through the control panel via the Administration/Engine/Print Density option.

3 Remove the toner cartridge and rock it as you would when installing a new cartridge. This redistributes toner inside the cartridge. Then, reinstall the cartridge.

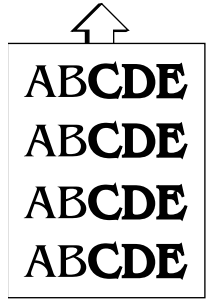
4 The toner cartridge may be defective. Install a new toner cartridge.

Blurred Background



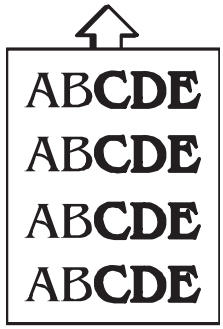
The toner cartridge may be defective. Install a new toner cartridge, if needed.

Offset (Double) Image



The photoconductive drum inside the toner cartridge may be dirty. Open the printer once and close it again to clean the drum.

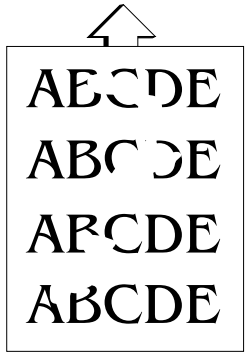
Uneven Print Density



1 Remove the toner cartridge and rock it as you do before installing a new cartridge. This redistributes toner inside the cartridge. Reinstall the cartridge.

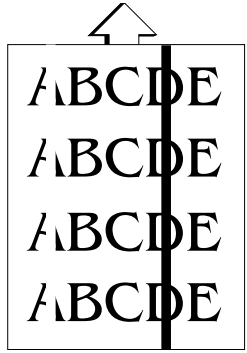
2 If step 1 does not solve the problem, install a new toner cartridge.

Irregular Print



The paper being used may have absorbed moisture (perhaps due to high humidity or having water spilled on the paper supply). Toner does not adhere well to paper at the positions where it has become wet. Replace the paper in the tray or cassette with dry paper, and retest for irregular print.

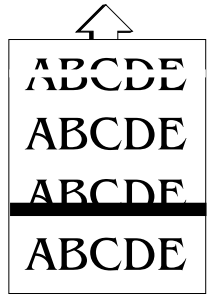
White (or Black) Stripes



1 The window glass of the Print Head may be dirty. Clean the glass as described in chapter 4, “Printer Care,” of this manual.

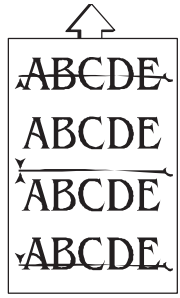
2 The toner cartridge may be defective. Install a new toner cartridge, if needed.

White (or Black) Bands



The toner cartridge may be defective. Install a new toner cartridge, if needed.

Repeated Flaws



1 The photoconductive drum inside the toner cartridge may be dirty. Open the printer once and close it again to clean the drum.

2 The photoconductive drum inside the toner cartridge may have a scratch on it. Install a new toner cartridge and test the print again.

3 The toner cartridge may have been exposed to too much light from external sources. Install a new toner cartridge and test the print again.

Placing a Service Call

If you have a problem you cannot resolve, contact your QMS vendor. Your QMS vendor is best equipped to handle most problems you may encounter. If you cannot get service from your vendor, see appendix A, “QMS Customer Support.”

If you have technical questions your QMS vendor is unable to answer, you may call QMS Customer Technical Assurance. See appendix A, “QMS Customer Support,” for information.

❖

A

QMS Customer Support

In This Chapter . . .

- Sources of customer support
- QMS world-wide offices

Sources of Support

Several sources of help and information are available, depending on the type of help you need:

Your QMS Vendor

Your local vendor (the one from whom you bought the printer) may be best equipped to help you. Your vendor has specially trained service technicians available to answer questions, and the equipment to analyze your printer problems.

Your Application Vendor

Often, “printing” problems have more to do with the application being used than with the printer. In this case, the application manufacturer is the best source of help.

Q-FAX

Q-FAX, a QMS information retrieval service, provides application notes, technical support notes on common printing problems, and information about printer specifications, options, accessories, consumables, and prices.

In the United States and Canada, call (800) 633-7213 to reach Q-FAX. In all other countries, call (334) 633-3850. Have your fax number handy when you call (or place the call from your fax machine's handset).

You can choose to have either a directory (a list of currently available documents on a particular topic) or a specific document sent to you. The first time you call, request the directory (press 2 on your phone or fax keypad when prompted). Then call back to request specific documents. You can order up to three documents per call.

The QMS Corporate Bulletin Board System

The QMS Corporate Bulletin Board System (BBS) contains technical support notes, application notes, drivers, patches, and utilities, and you may leave technical questions not requiring an immediate response on electronic mail for the Sysop (System Operator).

The bulletin board [(334) 633-3632] operates at 1200, 2400, 9600, and 14400 baud, 8 data bits, no parity, 1 stop bit, with XMODEM, YMODEM, and ZMODEM capabilities. Contact the QMS Customer Response Center for more information about the bulletin board.

CompuServe

Through CompuServe, you ask general (non-technical) questions, share information with other users, and access printing information and programs. When you use CompuServe type `go qmsprint↵` to go directly to the forum where QMS is located.

The QMS library section contains application notes, printer drivers, utilities, technical information, and announcement files.

Internet

The QMS server provides access to technical reports, new product announcements, a trade show schedule, and other general information about QMS.

You can access the QMS server via any one of the many web viewers available to Internet users. If you don't have access to a web viewer, we recommend the NCSA Mosaic web viewer (Mosaic is at ftp.ncsa.uiuc.edu). The QMS home page is at http://www.qms.com/. The QMS ftp resource is ftp.qms.com.

QMS Customer Response Center (CRC)

The QMS Customer Response Center is available from 7 a.m. to 6 p.m., Central Standard Time, at (334) 633-4500 (US). You can also fax questions to the CRC at (334) 633-3716 (US). Please indicate whether you would like a faxed or a phoned reply.

If you call for assistance, have the following information ready so our technicians can help you more quickly:

- Your phone number, fax number, and shipping address
- A description of the problem
- The printer model and serial number
- The type of host computer you are using
- The type and version of operating system you are using
- The interface you are using, and, if serial, the protocol
- The application and version you are using
- The emulation you are using
- Your printer firmware version (listed on the status and start-up pages)

QMS National Service

If you have a problem you cannot resolve, contact QMS National Service. You may need to contact QMS National Service for the following type of message (where # is the error number):

```
CALL FOR SERVICE ENGINE ERROR #
```

Phone Numbers

(800) 762-8894	Service information and maintenance pricing for QMS and other manufacturers printer's
(800) 858-1597	On-site service and depot repair information 7 a.m. to 7 p.m. Central Time
(334) 633-4300 **Extension 2530**	Spare parts ordering and information 8 a.m. to 5 p.m. Central Time

» **Note:** *The above numbers are valid in the United States. To contact QMS in other countries, see the "QMS World-wide Offices" section later in this appendix.*

QMS World-wide Offices

United States/ Latin America	QMS, Inc. One Magnum Pass Mobile, AL 36618 (334) 633-4300 Product Information: (800) 523-2696 OEM Information: (800) 631-2692 Consumables: (800) 777-7782 Fax: (334) 633-4866 E-mail: info@qms.com Latin America Fax: (334) 639-3347
Asia-Pacific	QMS Asia-Pacific Melbourne 61 (3) 899 5777 Sydney 61 (2) 901 3235 Tokyo (81) (3) 3437 4030
Canada	QMS Canada, Inc. 9630 Rte. Trans-Canadienne Saint-Laurent, Québec H4S 1V9 Telephones: (514) 333-5940, (800) 361-3392 Fax: (514) 333-5949 National Service: (800) 268-4969 National Service Fax: (905) 673-7676 Offices in Ottawa, Québec City, Toronto, and Vancouver
Europe, Middle East, Africa	Düsseldorf (49) 211/596 1333 London (44) (1) 784 442255 Maarssen (31) 3465 51 333 Paris (33) (1) 4107 9393 Stockholm (46) (8) 725 5680

❖

Index

10BaseT (GS)4-2
10Base2 (GS)4-2
3 hole punched paper (O)6-18

A

A3
Selecting size (R)4-70
A5
Selecting size (R)4-70
A6
Selecting size (R)4-70
Accessing the configuration menu (R)4-5
Accessing the Kanji fonts (R)6-26
Accessories
See printer options
Active Jobs
Status message (O)6-7
Adjust Inputbin Bin
Status message (O)6-7
Administration menu (R)4-5
Disk Operations (R)4-53
Memory (R)4-71
Passwords (R)4-79

Legend

GS *Getting Started* manual
O *Operation* manual
R *Reference* manual

Adobe
PageMaker (R)6-51
PhotoShop (R)6-53
Separator (R)6-51
Advanced printing features
High-resolution printing (O)5-4
Memory (O)5-5
Advanced status page won't print (O)6-21
Albertus (R)6-22
Aldus (R)6-53
Freehand (R)6-51
PageMaker (R)6-51
PrePrint (R)6-51
Aligning image (R)2-3
Allocating memory (R)4-71
ANSI ASCII symbol set (HP-GL) (R)3-10
Antique Olive (R)6-22
Apple Macintosh checklist (O)6-14
AppleTalk (R)G-1
Connection (R)6-45
See also LocalTalk
Testing communication (R)6-52
Troubleshooting (O)6-14
Application (R)G-1
Macintosh (R)6-51, (R)6-52
Notes, QMS (GS)3-12
PC (GS)3-12
ASCII (R)G-1
Automatic jam recovery (GS)1-13
Avant Garde Gothic
ITC Avant Garde Gothic (R)3-3

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

B

B4
Selecting size (R)4-70
B5
Selecting size (R)4-70
B6
Selecting size (R)4-70
Baud (R)G-2
Rate (R)G-2
Binary data printing problem (O)6-17
Bit (R)G-2
Bitmap (R)G-2
Bitmapped font (R)3-5
Black image (O)6-26
Black image, entire page (O)6-26
Blank pages, printing (O)6-18
Blurred background (O)6-29
BNC connection (GS)4-2
Bookman
ITC Bookman (R)3-3
Buffer (R)G-2
Spooling (R)5-19
Bulletin board, QMS (GS)3-12, (GS)A-3, (O)A-3, (R)A-3
Byte (R)G-2

C

Cable pinouts
IBM PC/AT (R)B-13
IBM PC/XT (R)B-13
Cabling
Ethernet interface (GS)4-2
LocalTalk (R)6-46
Macintosh (R)6-46
PC interface (GS)3-3
Calibration page (R)4-87
Special pages (R)4-87
Can't access fonts (O)6-24
Can't download fonts (O)6-23
Canadian users
Statement (R)D-4

Cancel key (GS)5-5, (O)3-7, (R)G-2
Cancelling a print job (O)3-7
Cancelling job (O)3-7
Status message (O)6-7
Card
Emulation (R)6-16
Font (R)6-16
Installing (R)6-15, (R)6-26
Security (R)6-26, (R)6-27, (R)6-29
Using (R)6-15
Cassette (GS)1-15, (R)6-2
Chaining (O)3-2, (R)4-67
Dual (R)6-3
Loading (GS)2-12
Loading, 500-sheet (O)2-3
Printer options (R)6-2
Standard (O)2-3
Chain Inputbins menu (R)4-67
Character set (R)3-2
Clarendon Condensed (R)6-22
Cleaning the printer (O)4-4
Cleaning guidelines (O)4-4
Cleaning the inside (O)4-5
Cleaning the outside (O)4-4
Close engine door
Status message (O)6-8
Collating
Output (O)3-3
PCL 5 files (O)3-6
Collation (O)3-3, (O)3-5, (R)4-16
Advantages (O)3-5
Chunk (O)3-5
PCL 5 files (R)4-19
Colophon (R)D-5
Communication
Modes (R)5-2
Testing, Macintosh (R)6-52
Testing, parallel port (GS)3-6
Testing, serial port (GS)3-7
CompuServe, QMS (GS)A-3, (O)A-3, (R)A-3
Configuration
Ethernet network (GS)4-14
Ethernet port (GS)4-10
Configuration menu (GS)B-3, (R)4-4
Accessing (R)4-5
Administration menu (R)4-5
Chart (R)E-2
Chart conventions (R)E-2
Installation menu (R)4-5
Menu Chart (GS)B-2
Menu chart conventions (GS)B-2
Operator Control menu (R)4-5
Configuring the printer for Kanji (R)6-25
Connection
Ethernet port (GS)4-2
Serial port (GS)3-5
Connector (R)G-3
Connector box (R)G-3
Conserve toner (O)2-19, (R)4-83
Consumables (R)G-3
Supplies (R)B-10
Warranty (R)B-16
Context switching (R)5-18
Control panel (GS)5-5
Cancel key (GS)5-5, (O)3-7
Data light (GS)5-3
Disk light (GS)5-3
Error light (GS)5-3
Menu key (GS)5-6
Message window (GS)5-3, (O)6-7
Next key (GS)5-6
Online/Offline key (GS)5-5
Previous key (GS)5-6
Ready light (GS)5-3
Select key (GS)5-6

Legend

GS *Getting Started* manual
O *Operation* manual
R *Reference* manual

Service message (O)6-10
Status messages (O)6-7
Status page key (GS)5-5
Tray select key (GS)5-5
Control panel problems
Data indicator stays lit (O)6-16
Paper jam message stays on (O)6-16
Controller (R)G-3
Specifications (R)B-4
Conventions, typographic (R)1-4
Coronet (R)6-22, (R)6-23
Courier (R)3-8, (R)6-22
cpi
Pitch (R)3-5
CRC
See Customer support
Crown (R)G-3
Crown Technology (GS)1-11
Automatic jam recovery (GS)1-13
Compile-Ahead Technology (GS)1-11
Compressed data formats (GS)1-12
Context switching (GS)1-12
Emulation Sensing Processor (GS)1-12
Multitasking (GS)1-11
Simultaneous Interface Operation (GS)1-11
CrownAdmin software
Installation, DOS (GS)4-5
Installation, Macintosh (GS)4-5
Installation, Windows (GS)4-9
CrownNet Manager software
Installation, OS/2 (GS)4-6
Customer support
See support, QMS

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

D

Dark image (O)6-26
Data indicator
Stays lit (O)6-16
Troubleshooting (O)6-13
Data light (GS)5-3
Default (R)G-4
Density, print (O)5-2
Device numbers, hard disks (R)6-68
Dingbats
ITC Zapf Dingbats (R)3-3
Disk
See hard disk
Disk cache (R)5-19
Intellifont SIMM (R)6-20
Disk light (GS)5-3
Disk Operations
Collation (O)3-3
Disk problems (O)6-22
External hard disk not on line (O)6-23
Internal hard disk not on line (O)6-22
Display list (R)5-16
DOC
See document option commands
Document option commands
Header/trailer feature (R)C-2, (R)C-4
HP PCL emulation features (R)C-3
HP-GL emulation features (R)C-3
PCL 5 (R)C-8
Printer features (R)C-4
Documentation
Conventions, typographic (R)1-4
Manual contents (O)1-2, (R)1-2
Overview of this manual (GS)1-6
Printer options (GS)1-4
QMS Crown Network Notes (GS)1-4
QMS Crown Remote Console (GS)1-4
QMS CrownNet Interface Card (GS)1-4
Related product (GS)1-5
Standard product (GS)1-3, (GS)1-5
UNIX Host Software (GS)1-5

DOS
CrownAdmin software (GS)4-5
mode command (GS)3-8
Dots per inch
See dpi
Download (R)G-4
Downloadable fonts (R)3-10
Downloading optional emulation (R)6-30
dpi (R)G-4
Driver
Macintosh, print (R)6-47
PC (GS)3-11
PostScript emulation (GS)3-12
Windows (GS)3-12
Driver folder
PDF (R)6-51
PDX (R)6-51, (R)6-52
PPD (R)6-51, (R)6-52

E

Emulation (R)5-18
Card (R)6-16
Downloading optional (R)6-30
HP-GL (GS)1-10
Installing emulation card (R)6-14
Installing optional (R)6-73
Lineprinter (GS)1-10, (R)4-47
Optional (GS)1-15
Optional, downloading (R)6-30
PCL 5 (GS)1-9
PostScript (GS)1-10, (R)4-50
Removing optional (R)6-74
Resident (GS)1-9
Temporary (R)5-18
Using emulation card (R)6-14
Emulation problems (O)6-17
End Job Mode (R)5-21
Ending a print job (O)3-7
End-of-Document command (R)5-21
Energy star (GS)1-13, (GS)2-4
Compliance statement (R)D-4
Environmental requirements (R)B-5
EOD command (R)5-23
Adding to your file (R)5-27
Network job separator (R)5-28
Other print queuing systems (R)5-24
PC print server (R)5-24
Stand-alone PC (R)5-24
EOD command problems (O)6-19
Erro (O)6-10
Error 1 service message (O)6-10
Error 11 service message (O)6-10
Error 12 service message (O)6-10
Error 20 service message (O)6-10
Error codes
HP-GL (O)6-11
PCL (O)6-11
Error light (GS)5-3
ESP
Printing mode (GS)1-12
Troubleshooting (O)6-13
Ethernet (GS)3-2, (R)4-54
Ethernet interface printing problem (O)6-18
Ethernet port
10Base2 (GS)4-2
10BaseT (GS)4-2
BNC connector (GS)4-2
Configuration (GS)4-10
Configuration, network (GS)4-14
Connection (GS)4-2
CrownAdmin software, DOS (GS)4-5
CrownAdmin, Macintosh (GS)4-5
RJ45 connector (GS)4-2
Software installation (GS)4-4
Thin-wire Ethernet (GS)4-2
Troubleshooting (GS)4-19

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

Twisted-pair Ethernet port (GS)4-2
EtherTalk (GS)3-2
Configuration, Ethernet port (GS)4-11
Configuration, network (GS)4-14
External hard disk (R)B-9
Not on line (O)6-23

F

FCC compliance statement (R)D-2
Feeder (GS)1-15
Installing (R)6-4
Unpacking (R)6-4
Flash memory (R)4-27, (R)4-29, (R)4-33
New flash image (R)4-20
System software, updating (R)4-20
Flash ROM
See Flash memory
Font problems (O)6-24
Can't access fonts (O)6-24
Can't download fonts (O)6-23
Fonts
Bitmapped (R)3-5
Card (R)6-14, (R)6-16
Defined (R)3-2
Downloadable (R)3-10
Installing font card (R)6-14
Installing optional (R)6-73
Intellifont SIMM (R)6-17, (R)6-22
Intellifonts (R)6-22
Optional (GS)1-15
Optional, card (R)6-14
PCMCIA card (GS)1-14
PostScript (R)3-10
PostScript emulation (R)B-4

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

Removing optional (R)6-74
Resident (GS)1-10
Scalable (R)3-5
Screen, Macintosh (R)6-48
See also specific font name
Subset (R)3-2
TrueType (R)3-10
Using font card (R)6-14
Format Disk option (R)4-53
Formatting a hard disk (R)4-53
Frame buffer (R)5-14
French/German symbol set (HP-GL) (R)3-10

G

Gamma correction (O)5-2, (R)5-2, (R)5-6
Gray levels (R)5-3
Halftone (R)5-3
Screen angle (R)5-6
Screen frequency (R)5-4
Garamond (Stempel) (R)6-23
General (O)6-25
Gray levels (R)5-3, (R)5-5
Gray-scale (R)5-6

H

Halftone (O)5-3
Cells (R)5-3
Gamma correction (R)5-3
Type (O)5-3
Halftone quality
Device resolution (R)5-3
Laser beam (R)5-3
Scan quality (R)5-3
Screen frequency (R)5-3
Hard disk (R)4-52, (R)5-21
Device numbers (R)6-68
External (R)6-57, (R)B-9
Formatting (R)4-53, (R)6-71
Identifying (R)6-68
Internal (R)B-9

IDE-SCSI board (R)B-9
Internal (R)B-9
Removing an internal IDE (R)6-67
SCSI (R)B-9
Helvetica (R)3-8
High-resolution printing (O)5-4
Host input (R)5-19
Host Software, UNIX
Documentation (GS)1-5
How to
Cancel a print job (O)3-8, (O)3-9
Chain cassettes (O)3-2
Format a disk (R)6-71
Install an option (R)6-73, (R)6-75
Print a status page (O)3-6
HP EOD
EOD command (R)5-23
HP PCL emulation
HP PCL fonts (R)3-9, (R)3-10
HP PCL fonts (R)3-9
HP-GL
Error codes (O)6-11
HP-GL symbol sets (R)3-10
9825 Character Set symbol set (HP-GL) (R)3-10
ANSI ASCII (R)3-10
French/German (R)3-10
ISO French (R)3-10
ISO German (R)3-10
ISO IRV (International Reference Version) (R)3-10
ISO Italian (R)3-10
ISO Norway, Version 1 (R)3-10
ISO Norway, Version 2 (R)3-10
ISO Spanish (R)3-10
ISO Swedish (R)3-10
ISO Swedish For Names (R)3-10
ISO United Kingdom (R)3-10
JIS ASCII (R)3-10
Katakana (R)3-10
Roman Extensions (R)3-10
Scandinavian (R)3-10
Spanish/Latin (R)3-10
Special Symbols (R)3-10

I

IBM PC
AT cable pinouts (R)B-13
XT cable pinouts (R)B-13
IDE-SCSI board (R)6-25, (R)6-57, (R)B-9
Idle
Status message (O)6-8
Idle input printing
Status message (O)6-8
Image alignment (R)2-3
Imageable area (R)2-2
Image alignment (R)2-3
Initializing
Status message (O)6-8
Input tray
Standard (O)2-3
Inputbin
Chaining (R)4-67
Install option
Installing (R)6-73, (R)6-75
Installation
Cassette (GS)2-12
Configure the printer (R)6-62
Emulation, optional (R)6-73
Fonts, optional (R)6-73
Printer options (GS)2-19
Toner cartridge (GS)2-9
Installation menu (R)4-5
Installing
Emulation card (R)6-14
Feeder (R)6-4
Font card (R)6-14

Legend

GS *Getting Started* manual
O *Operation* manual
R *Reference* manual

Installing IDE-SCSI board (R)6-25
Intellifont SIMM (R)6-17
Accessing fonts (R)6-24
Albertus (R)6-22
Antique Olive (R)6-22
Clarendon Condensed (R)6-22
Coronet (R)6-22, (R)6-23
Courier (R)6-22
Disk cache size (R)6-20
Font list (R)6-22
Garamond (Stempel) (R)6-23
Installing (R)6-17
Letter Gothic (R)6-23
Marigold (R)6-22
Omega (R)6-23
Times Roman (R)6-23
Univers (R)6-23
Univers Condensed (R)6-23
Verifying installation (R)6-21
Intellifonts not on status page (O)6-24
Interfaces
Ethernet (GS)3-2
EtherTalk (GS)3-2
Network (GS)3-2
Novell NetWare (GS)3-2
Optional, network (GS)1-16, (GS)3-2
Standard (GS)1-9
TCP/IP (GS)3-2
Internal hard disk (R)B-9
Not on line (O)6-22
International Reference Version
See ISO IRV
Internet, QMS (GS)A-3, (O)A-3, (R)A-3
Irregular print (O)6-30
IRV
ISO
See HP-GL symbol sets
ISO French symbol set (HP-GL) (R)3-10
ISO German symbol set (HP-GL) (R)3-10
ISO IRV (International Reference Version) symbol set (HP-GL) (R)3-10
ISO Italian symbol set (HP-GL) (R)3-10
ISO Norway, Version 1 symbol set (HP-GL) (R)3-10
ISO Norway, Version 2 symbol set (HP-GL) (R)3-10
ISO Spanish symbol set (HP-GL) (R)3-10
ISO Swedish For Names symbol set (HP-GL) (R)3-10
ISO Swedish symbol set (HP-GL) (R)3-10
ISO United Kingdom symbol set (HP-GL) (R)3-10
Italic (R)3-6
ITC Bookman (R)3-8
ITC Zapf Chancery (R)3-8
ITC Zapf Dingbats (R)3-8

J

Jams
See print media jams
JIS ASCII symbol set (HP-GL) (R)3-10

K

Kanji option kit (R)6-24
Accessing the Kanji fonts (R)6-26
Configuring the printer for Kanji (R)6-25
Installing IDE-SCSI board (R)6-25
Minimum Kanji memory settings (R)6-25
Katakana symbol set (HP-GL) (R)3-10
Key
Cancel (R)G-2

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

Keypad language (R)4-14

L

Labels
Printing (R)2-5
Stock (R)2-5
Vendor (R)B-10
LAN Manager/LAN Server
Configuration, Ethernet port (GS)4-11
Configuration, network (GS)4-14
LAN Server
See LAN Manager/LAN Server
Landscape orientation (R)3-6
Laser safety (R)D-2
LaserJet 4Si (R)6-17
LaserPrep (O)6-14, (R)6-49
LaserWriter (O)6-14, (R)6-49
Legal
Selecting size (R)4-70
Letter
Selecting size (R)4-70
Letter Gothic (R)6-23
Letterhead (O)2-9
Light image (O)6-28
Limit check error (O)6-15
Lineprinter
Setting parameters (R)4-47
Lines per inch (R)5-4
Loading print media
Multipurpose tray (O)2-9
LocalTalk (R)4-55, (R)6-45
Cabling (R)6-46
Pinouts, cable (R)B-14
See also AppleTalk
Location requirements (GS)2-2

M

Macintosh
Application (R)6-51, (R)6-52
Cabling (R)6-46
CrownAdmin software (GS)4-5
Driver, print (R)6-47
Laser Prep (R)6-49
LaserWriter (R)6-49
Limit check error (O)6-15
Macintosh-to-serial cable pinouts (R)B-14
Print Monitor (R)6-49
PS Executive Series utilities (R)6-47
Screen fonts (R)6-48
Software (R)6-51, (R)6-52
Software, printing (R)6-47
System 6 (R)6-50
System 7 (R)6-50
System software, updating (R)4-20
Testing communication (R)6-52
Troubleshooting (O)6-14
Manual
Contents (GS)1-6, (O)1-2, (R)1-2
Notice (R)D-2
Overview (GS)1-6
Typographic conventions (GS)1-7, (O)1-3
Margins
Imageable area (R)2-2
Page (R)2-4
Marigold (R)6-22
Media
Flexibility (GS)1-8
Imageable area (R)2-3
See Print media
Media cassette
Loading (GS)2-12
Memory (R)5-8
Administration menu (R)5-14
Allocating (R)4-71
Client (R)5-8, (R)5-10, (R)G-9
Clients (R)5-14

Legend

GS *Getting Started* manual
O *Operation* manual
R *Reference* manual

Disk cache (R)6-20
Management (R)5-9
Non-volatile (R)5-11
Physical (R)5-12
Terms (R)5-9
Virtual (R)5-12, (R)5-17, (R)5-21
Volatile (R)5-11
Menu
See Configuration menu
Menu key (GS)5-6
Message
See Service Message
See Status Message
Message window (GS)5-3, (O)6-7
Setting message window language (GS)5-3
Mode command (DOS) (GS)3-8
Mode, printing
PostScript (GS)1-12
Modes
Communication (R)5-2
Monospacing (R)3-4
Multiple pages problem (O)6-19
Multipurpose Sz (R)4-70
Multipurpose tray
Labels (R)2-5
Loading print media (O)2-9

N

National service, QMS (GS)A-4, (GS)A-5, (O)A-5, (R)A-5
United States (R)A-4
World-wide (GS)A-6, (R)A-6
NetWare
Configuration, Ethernet port (GS)4-12
Configuration, network (GS)4-17
Netware banner page doesn't print (O)6-20
Network
Interface (R)6-38, (R)6-42
Network 2 (R)4-54
Network job separator
Creating (R)5-28
New Flash Image menu (R)4-20
Next key (GS)5-6
No start-up page (O)6-21
Not all pages print (O)6-20
Novell NetWare (GS)3-2
See NetWare

O

Oblique (R)3-6
Offset double image (O)6-29
Offset, double image (O)6-29
Omega (R)6-23
Online/Offline key (GS)5-5
Operator Control menu (R)4-5
Chain Inputbins (R)4-67
Collation (R)4-16
Multipurpose Sz (R)4-70
Passwords (R)4-79
Optional interface (GS)1-16
Options
See printer options
Orientation
Landscape (R)3-6
Portrait (R)3-6
Orientation problem (O)6-20
Output problems (O)6-20
OS/2
CrownNet Manager installation (GS)4-6
Output problems
600x600 dpi printing unavailable (O)6-17
Binary data printing problem (O)6-17
Blank pages (O)6-18

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

EOD command problems (O)6-19
Ethernet interface printing problem (O)6-18
Multiple pages problem (O)6-19
Netware banner page doesn't print (O)6-20
Not all pages print (O)6-20
PostScript error handler (O)6-20
Ozone density (R)B-5

P

Page margins (R)2-4
Paper
Capacity (O)3-2
Letterhead (O)2-16
Memo (O)2-16
Vendor (R)B-10
Paper cassette
See Cassette, Inputbin, Cassette
Paper jam
Status message (O)6-8
Paper jam message stays on (O)6-16
Paper path (O)2-17
Parallel interface
Centronics IEEE 1284 cable pinouts (R)B-11
Centronics IEEE 488 cable pinouts (R)B-11
System software, downloading (R)4-27, (R)4-33
Parallel port (GS)3-6
Testing communication (GS)3-6
Parallel protocol (R)5-22
Passwords (R)4-79
PC
Application (GS)3-12
Driver (GS)3-11
Printer description file (GS)3-14
PS Executive Series Utilities (GS)3-11
Software (GS)3-12
Software, printing (GS)3-11
System software, updating (R)4-20
Testing parallel port (GS)3-6
Testing serial port (GS)3-7
Troubleshooting (O)6-14
PC/AT
See IBM PC
PC/XT
See IBM PC
PCL
Error codes (O)6-11
PCL 5
Document option commands (R)C-8
Intellifont font list (R)6-22
Intellifont SIMM (R)6-17
PCMCIA card (GS)1-14
PDF (R)6-51
PDF file (GS)3-14
PDX (R)6-51, (R)6-52
PhotoShop (R)6-53
Physical characteristics
Dimensions (R)B-3
Pinouts, cable
Centronics IEEE 1284 cable (R)B-11
Centronics IEEE 488 (R)B-11
IBM PC/AT (R)B-13
IBM PC/XT (R)B-13
LocalTalk (R)B-14
Macintosh-to-serial (R)B-14
Serial (R)B-12
Pitch (R)3-5
Placing a service call (O)6-31, (O)6-32
Point size (R)3-5
Portrait orientation (R)3-6
PostScript
Fonts (R)3-10
Printing mode (GS)1-12
Setting parameters (R)4-50

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

PostScript error
Error handler (O)6-20
PostScript font cache (R)5-17
PostScript heap (R)5-17
PostScript level 1 printing (O)6-17
PostScript operators
setgray (R)5-6
setscreen (R)5-6
showpage (GS)3-6
Power cord, connecting (GS)2-17
Power requirements (GS)2-4
Energy star, compliance (GS)2-4
PPD file (GS)3-14, (R)6-51, (R)6-52
Previous key (GS)5-6
Print density (O)5-2, (R)4-82
Setting (R)4-82
Print job
Cancelling (O)3-7, (O)3-8, (O)3-9
Print media
Imageable area (R)2-2
Jams (R)2-2
Margins (R)2-4
Page sizes (R)B-6
Page sizes and imageable area (R)2-2
Sizes (R)2-2
Transparencies (R)2-2
Vendor (R)B-10
Print media jams (O)6-2
Locating (O)6-2
Preventing (O)2-2, (R)2-6
Restart printing (O)6-6
Print Monitor (R)6-49
Print problems (O)4-2
Print quality
Distortions (O)6-25
Gamma correction (O)5-2
Halftone (R)5-3
Problems (O)6-25
Screen angles (R)5-6
Uneven blacks (O)6-25
White lines (O)6-25
Wrinkled pages (O)2-3
Print quality problems (O)6-25, (O)6-28, (O)6-29, (O)6-31
Black image, entire page (O)6-26
Blurred background (O)6-29
Irregular print (O)6-30
Printiout too dark (O)6-26
Specific (O)6-25
Toner smudges (O)6-27
Uneven print density (O)6-30
White or black stripes (O)6-31
Print resolution (R)5-5
Gray levels (R)5-5
Printer
Automatic jam recovery (GS)1-13
Blank pages (O)6-18
Cleaning (O)4-2
Crown Technology (GS)1-11
Electrical requirements (R)B-5
Engine (R)B-2
Features (GS)1-8
Handling (O)4-2
Lifting (O)4-2
Location requirements (GS)2-2
Physical characteristics (R)B-3
Power requirements (GS)2-4
Problem checklist (O)6-11
Reinstalling the controller board (R)6-11
Removing controller board (R)6-9
Resolution (GS)1-8
Weight (R)B-3
Printer driver
Macintosh (R)6-47
Printer drivers
See drivers
Printer options (GS)1-14, (R)6-17, (R)B-9

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

Card (R)6-26
Cards (R)6-15
Cassette (R)6-2
Cassette and feeder (GS)1-15
Documentation (GS)1-4
Emulation card (R)6-14
Font card (R)6-14
Hard disk, external (R)B-9
IDE-SCSI board (R)6-57, (R)B-9
Intellifont SIMM (R)6-14
Kanji option kit (R)6-14
Security card (R)6-26
Upgradable memory (GS)1-15
Printer problems
Advanced status page won't print (O)6-21
Disk problems (O)6-22
EOD command problems (O)6-19
Font problems (O)6-23
No start-up page (O)6-21
Printer resets (O)6-22
Printer resets (O)6-22
Printing
600x600 dpi unavailable (O)6-17
Printing environments (R)5-13
Printing mode (GS)1-12
Printing status
Status message (O)6-8
Printout too dark (O)6-26
Printout too light (O)6-28
Problem checklist
Print quality (O)6-25
Proportional spacing (R)3-4
Protocol (O)6-14
Troubleshooting (O)6-14
PS Executive Series Utilities (GS)3-11, (R)2-3, (R)6-47
PS protocol (R)5-30
Advantages (R)5-33
Implementation (R)5-34
Quoted character (R)5-31
Put size paper in input bin
Status message (O)6-8, (O)6-9

Q

Q-FAX, QMS (GS)3-12, (GS)A-2, (O)A-2, (R)A-2
QMS
Bulletin board (GS)3-12
National service (GS)A-5
Q-FAX (GS)3-12
Registration, printer (GS)2-5
Support (GS)A-2
Word-wide offices (GS)A-6
QMS Crown Remote Console documentation (GS)1-4
QMS CrownNet interface documentation (GS)1-4
QMS EOD
EOD command (R)5-23
QuarkXPress (R)6-51, (R)6-52
Quoted character (R)5-31

R

Radiation (R)D-2
RAM (R)5-10
RAM disk (R)5-11
Ready light (GS)5-3
Reasons to use end job mode (R)5-22
Registration,printer (GS)2-5
Remote console (GS)1-14
Documentation (GS)1-4
Removing
Emulation, optional (R)6-74
Fonts, optional (R)6-74
IDE-SCSI board (R)6-62
Internal IDE hard disk (R)6-67
Removing controller board (R)6-9
Repeated flaws (O)6-31

Legend

GS *Getting Started* manual
O *Operation* manual
R *Reference* manual

Resident emulations (GS)1-9
Resident fonts
HP PCL fonts (R)3-9, (R)3-10
Resolution, printer (GS)1-8
Restoring factory defaults (R)4-14
RJ45 connector (GS)4-2
ROM (R)5-10
Roman Extensions symbol set (HP-GL) (R)3-10

S

Sans serif typefaces (R)3-3
Scalable fonts (R)3-5
Scandinavian symbol set (HP-GL) (R)3-10
Schoolbook
New Century Schoolbook (R)3-3
Screen angle (R)5-6
Screen fonts
Macintosh (R)6-48
Screen frequency (R)5-3, (R)5-5
Script typefaces (R)3-3
SCSI (R)5-11
Hard disk (R)B-9
Security card (GS)1-15, (R)6-26
Select key (GS)5-6
Serial interface
Cable pinouts (R)B-12
System software, downloading (R)4-29, (R)4-33
Serial port (GS)3-7
Parameters, changing (GS)3-9
Testing communication (GS)3-7
Serial protocol (R)5-22
Serif typefaces (R)3-3
Service
See national service
Service call
Placing (O)6-32
Service message (O)6-10
Error 1 (O)6-10
Error 11 (O)6-10
Error 12 (O)6-10
Error 20 (O)6-10
Service, QMS
United States (O)A-4
World-wide (O)A-6
setgray (R)5-6
setscreen (R)5-6
Setting ethernet interface parameters (R)4-54
Setting LocalTalk interface parameters (R)4-55
Setting parallel interface parameters
Emulation (R)4-56
Mode (R)4-55
Setting the end job mode (R)5-24
Setting the keypad language (R)4-14
Setting the resolution (O)5-4
Shipment (GS)2-6
Contents (GS)2-4
showpage operator (PostScript) (GS)3-6
Signal direction (R)B-12
SIMM (R)5-11
Intellifont (R)6-17
Simultaneous Interface Operation (GS)1-11
SIO
See Simultaneous Interface Operation
SLS
See Software loadable system
Software
Macintosh (R)6-51, (R)6-52
Macintosh, printing (R)6-47
PC (GS)3-12
Software loadable system (GS)1-13
Spanish/Latin symbol set (HP-GL)

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

(R)3-10
Special pages
Calibration page (R)4-87
Special Symbols symbol set (HP-GL) (R)3-10
Specifications
Controller (R)B-4
Duty cycle (R)B-2
Emulations (R)B-4
Memory (R)B-4
Ozone density (R)B-5
Print engine (R)B-2
Print Media (R)B-6
Print method (R)B-2
Print speed (R)B-2
Resolution (R)B-2
Toner (R)B-2
Toner cartridge (R)B-2
Warm-up time (R)B-3
Spool (R)5-12
Spool buffers (R)5-19
Standard interfaces (GS)1-9
Start-up page
Disabling (GS)2-19
Enabling (GS)2-19
Information (GS)2-18
Printing (GS)2-18
Troubleshooting (O)6-21
Status message
Active Jobs (O)6-7
Adjust Inputbin Bin (O)6-7
Cancelling job (O)6-7
Close engine door (O)6-8
Control panel (O)6-7
Idle (O)6-8
Idle input printing (O)6-8
Initializing (O)6-8
Message window (O)6-7
Paper jam (O)6-8
Printing status (O)6-8
Put size paper in input bin (O)6-8, (O)6-9
Toner out (O)6-9
Waiting for idle (O)6-9
Waiting on input end job (O)6-9
Warming up (O)6-9
Status page
Printing (O)3-6
Selecting the status page type (O)3-6
Troubleshooting (O)6-12
Status page key (GS)5-5
Stempel
See Garamond (Stempel)
Stroke weight (R)3-6
Support, QMS (GS)A-2, (R)A-2
Bulletin board (GS)A-3, (O)A-3, (R)A-3
CompuServe (GS)A-3, (O)A-3, (R)A-3
Customer (GS)A-2, (O)A-2, (R)A-2
Customer Response Center (GS)A-4
Internet (GS)A-3, (O)A-3, (R)A-3
Q-FAX (O)A-2
Technical (GS)A-4, (O)A-4, (R)A-4
United States (GS)A-4, (O)A-4, (R)A-4
World-wide (GS)A-6, (O)A-6, (R)A-6
Symbol (R)3-8
Symbol sets (GS)1-10
HP-GL (R)3-10
See HP-GL symbol sets
System memory (R)5-20
System software
Downloading via parallel port (R)4-27, (R)4-33
Downloading via serial port (R)4-29, (R)4-33
Updating (R)4-20
System use (R)5-20

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

T

TCP/IP (GS)3-2
  Configuration, Ethernet port (GS)4-13
  Configuration, network (GS)4-18
Temporary emulation (R)5-18
Testing, PC (GS)3-7
  Parallel port (GS)3-6
  Serial port (GS)3-7
Thin-wire Ethernet (GS)4-2
Times Roman (R)6-23
Toner cartridge
  Conserving (O)2-19, (R)4-83
  Conserving toner (GS)1-8
  Installing (GS)2-9, (O)2-22
  Installing and storing (O)2-18
  Life (O)2-19
  Model EP-B (R)B-2
  Needed, symptoms (O)2-20
  Redistributing (O)2-20
  Refilled (O)2-19
  Removing (O)2-20
  Replacing (O)2-20
Toner out
  Status message (O)6-9
Toner smudges (O)6-27
Transparencies (R)2-5
  Imageable area (R)2-2
  Print (O)2-17
  Problems (O)2-17
  Sizes (R)2-2
  Vendor (R)B-10
Tray
  Chaining (O)3-2
Tray assembly (R)6-9
Tray select key (GS)5-5

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual

Trouble printing PostScript files (O)6-17
Troubleshooting (O)6-31
  Apple Macintosh checklist (O)6-14
  AppleTalk (O)6-14
  Blank pages (O)6-18
  Data indicator (O)6-13
  EOD problems (O)6-19
  ESP (O)6-13
  Ethernet port (GS)4-19
  Limit check error (O)6-15
  Macintosh (O)6-14
  Multiple pages problem (O)6-19
  Orientation problem (O)6-20
  Output problems (O)6-17
  Paper jam message (O)6-16
  PC (O)6-14
  PostScript level 1 problems (O)6-17
  Print quality problems (O)6-25
  Printer resets (O)6-22
  Problem checklist (O)6-11
  Protocol (O)6-14
  Service calls (O)6-32
  Service message (O)6-10
  Start-up page (O)6-21
  Status messages (O)6-7
  Status page (O)6-12
Twisted-pair Ethernet (GS)4-2
Typeface (R)3-2
  Card (R)6-16
  Courier (R)3-8, (R)3-9, (R)6-22
  Defined (R)3-2
  Downloading (O)6-16
  Family (R)3-2
  Helvetica (R)3-8
  Italic (R)3-6
  ITC Bookman (R)3-8
  ITC Zapf Chancery (R)3-8
  ITC Zapf Dingbats (R)3-8
  LinePrinter (R)3-9
  Monospacing (R)3-4
  Oblique (R)3-6
  Pitch (R)3-5

Point size (R)3-5
Proportional spacing (R)3-4
Sans serif (R)3-3
Script (R)3-3
Serif (R)3-3
Stroke weight (R)3-6
Symbol (R)3-8
Times (R)3-9
Univers Condensed (R)3-9
Zapf Dingbats (R)3-9
Typographic conventions (R)1-4

U

Uneven print density (O)6-30
Univers (R)6-23
Univers Condensed (R)6-23
Universal
Selecting size (R)4-70
UNIX
Utilities, installation (GS)4-8
UNIX Host Software
Documentation (GS)1-5
Unpacking (GS)2-6
Feeder (R)6-4
Printer (GS)2-6
Updating system software (R)4-20
Upgradable memory (GS)1-15
Using
Emulation card (R)6-14
EOD command (R)5-23
Font card (R)6-14

V

Vendor
Labels (R)B-10
Paper (R)B-10
Print media (R)B-10
Transparencies (R)B-10
Virtual disk (R)5-11
Virtual memory (R)5-17, (R)5-21

W

Waiting for idle
Status message (O)6-9
Waiting on input end job
Status message (O)6-9
Warming up
Status message (O)6-9
Warranty (R)B-16
Electrostatic discharge (R)B-16
White lines (O)6-30
White or black bands (O)6-31
White or black stripes (O)6-31
Windows
CrownAdmin software (GS)4-9
Windows driver (GS)3-12

Z

Zapf Chancery
ITC Zapf Chancery (R)3-3
Zapf Dingbats
ITC Zapf Dingbats (R)3-3

❖

Legend

GS	*Getting Started* manual
O	*Operation* manual
R	*Reference* manual